FINAL

TRANSPORTATION AIR QUALITY CONFORMITY ANALYSIS

FOR
TRANSPORTATION 2030 PLAN AND
2005 TRANSPORTATION IMPROVEMENT PROGRAM/AMENDMENT #05-05

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The Metropolitan Transportation Commission (MTC) has conducted a transportation air quality conformity analysis of the Transportation 2030 Plan and 2005 Transportation Improvement Program (TIP)/Amendment #05-05 in accordance with EPA's transportation conformity regulations and MTC's Bay Area Air Quality Conformity Procedures (MTC Resolution No. 3075). This report explains the basis for the conformity analysis and provides the results used by MTC to make a positive conformity finding. An air quality conformity finding is required when MTC updates its long range transportation plan (the Transportation 2030 Plan), or adds or deletes regionally significant projects in the TIP (2005 TIP/ Amendment #05-05). This finding will also serve to determine conformity of the Plan and TIP under EPA's new national 8-hour ozone standard, a finding which must be made by June 2005. In adopting the conformity finding for the TIP Amendment #05-05, this action also serves to re-determine the conformity for the entire 2005 TIP.

INTRODUCTION

PURPOSE OF CONFORMITY ANALYSIS

The 1990 Clean Air Act Amendments (CAAA) outlines requirements for ensuring that federal transportation plans, programs and projects conform to the State Implementation Plan's (SIP) purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards. The U.S. EPA subsequently published conformity regulations to implement the 1990 CAAA conformity requirements in November 1993, and revised them in August 1995, November 1995 and August 1997. Metropolitan Planning Organizations such as MTC are required to adopt and follow these regulations. MTC Resolution No. 3075 is the MTC resolution adopting EPA's most current regulation on conformity procedures for transportation plans, programs and projects. These revised conformity procedures were submitted to U.S. EPA in 1998.

These regulations and resolutions state, in part, that MTC cannot approve any transportation plan, program or project unless these activities conform to the purpose of the federal air quality plan (officially titled the State Implementation Plan, or SIP). "Transportation plan" refers to the Regional Transportation Plan (RTP). "Program" refers to the Transportation Improvement Program (TIP), which is a financially realistic set of highway and transit projects to be funded over the next three years. A "transportation project" is any highway or transit improvement, which is included in the RTP and TIP and requires funding or approval from the Federal Highway Administration or the Federal Transit Administration. Conformity regulations also affect regionally significant non-federally funded projects which must be included in a conforming plan and program.

STATUS OF REGIONAL TRANSPORTATION PLAN

This conformity analysis addresses the latest major update to MTC's long range transportation plan, the Transportation 2030 Plan. MTC released the Draft Transportation 2030 Plan and Draft Environmental Impact Report for the Transportation 2030 Plan for public review on November 12, 2004. The Transportation 2030 Plan represents a strategic investment plan to improve system performance for Bay Area travelers over the next 25 years and includes a set of highway, transit, local roadway, bicycle and pedestrian projects identified through regional and local transportation planning processes. Key investments would focus on adequate maintenance, system efficiency, and strategic expansion.

Similar to previous long-range plans, the Transportation 2030 Plan is made up of two separate elements. The "financially constrained" element includes those transportation projects that would be funded through revenues projected to be reasonably available over the next 25-year horizon of the plan. The more comprehensive "vision" element would identify illustrative transportation projects that would be funded through revenue measures that may become available in the future through either legislative action or voter mandate. This conformity analysis addresses only those projects identified in the financially constrained element of the Transportation 2030 Plan.

Once adopted, the Transportation 2030 Plan will guide development of the Bay Area's Transportation Improvement Program (TIP) in which projects and their specific funding sources are listed. Requests for federal or state funds for specific projects must be consistent with the RTP and TIP.

The last major update of the Regional Transportation Plan was the 2001 Regional Transportation Plan adopted by MTC in December 2001 (MTC Resolution No. 3427). The Federal Highway Administration and Federal Transit Administration approved MTC's conformity determination for the 2001 RTP on March 18, 2002 (MTC Resolution No. 3432).

STATUS OF TRANSPORTATION IMPROVEMENT PROGRAM

The federally required Transportation Improvement Program (TIP) is a comprehensive listing of all Bay Area transportation projects that receive federal funds or that are subject to a federally required action, or are considered regionally significant for air quality conformity purposes. MTC prepares and adopts the TIP every two years. By law, the TIP must cover at least a three-year period and contain a priority list of projects grouped by year. Further, the TIP must be financially constrained by year, meaning that the amount of dollars programmed must not exceed the amount of dollars estimated to be available. The TIP must include a financial plan that demonstrates that programmed projects can be implemented. All projects included in the TIP must be derived from and/or consistent with the RTP. Adoption of the TIP must be accompanied by an air quality conformity analysis and finding.

The latest conforming TIP is the 2005 TIP adopted by the Commission on July 28, 2004 (MTC Resolution No. 3630). MTC has prepared Amendment #05-05 to the 2005 TIP. This amendment adds transportation projects identified in Regional Measure 2 Toll Bridge Program, adds newly approved sales tax projects in Contra Costa, Marin, Sonoma, and San Mateo counties, reconciles State Transportation Improvement Program (STIP) projects, and adds or deletes other exempt and non-exempt projects consistent with the RTP. The list of 2005 TIP Amendment #05-05 projects is contained in Appendix A (specific funding sources are identified in the TIP amendment itself). This conformity analysis for TIP Amendment #05-05 also serves to re-conform the entire 2005 TIP under both the 1-hour and 8-hour national ozone standards.

BAY AREA AIR POLLUTANT DESIGNATIONS

National 1-Hour Ozone Standard

On November 6, 1991, the U.S. Environmental Protection Agency (EPA) designated the Bay Area as a moderate ozone non-attainment area. Based on "clean" air monitoring data from 1990 to 1993, the co-lead agencies—Bay Area Air Quality Management District (BAAQMD), MTC, and Association of Bay Area Governments (ABAG)— determined that no ozone violations had occurred and requested the California Air Resources Board (ARB) to forward a redesignation request and an ozone maintenance plan to U.S. EPA.

On May 25, 1995, the Bay Area was classified as an ozone maintenance area, having attained the 1-hour national ozone standard for five years (1990-1994). However, on July 10, 1998 the U.S. EPA published a Notice of Final Rulemaking redesignating the Bay Area back to an ozone non-attainment (unclassified) area. This action was due to violations of the 1-hour standard that occurred during the summers of 1995 and 1996, and became final on August 10, 1998.

On October 31, 2003, U.S. EPA proposed a finding of attainment of the national 1-hour ozone standard for the Bay Area. The proposed finding is based on air quality monitoring data from the 2001, 2002, and 2003 ozone seasons. In April 2004, U.S. EPA made a final finding that the Bay Area has attained the national 1-hour ozone standard. Because of this finding, some of the elements of the 2001 Ozone Attainment Plan, submitted to EPA to demonstrate attainment of the 1-hour standard, are no longer required. The finding of attainment does not mean the Bay Area has been reclassified as an attainment area for the 1-hour standard. To be reclassified, the region must submit a formal redesignation request to EPA. The Bay Area Air Quality Management District (BAAQMD), in conjunction with MTC and ABAG, are currently preparing the Bay Area 2005 Ozone Strategy. The portion of the 2005 Ozone Strategy addressing national 1-hour ozone planning requirements will include: (1) a redesignation request, and (2) a maintenance plan to show the region will continue to meet the 1-hour ozone standard.

National 8-Hour Ozone Standard

In July 1997, U.S. EPA revised the ozone standard, setting it to 0.08 parts per million and defined new standard as "concentration-based" form, specifically the 3-year average of the annual 4th highest daily maximum 8-hour ozone concentrations. In April 2004, EPA issued final designations for attainment and non-attainment areas. The Bay Area monitoring stations recorded concentrations that exceeded the national 8-hour ozone standard for 2001, 2002 and 2003. In April 2004, EPA formally designated the Bay Area as a non-attainment area for national 8-hour ozone, and classified the region as "marginal" based on five classes of non-attainment areas for ozone, ranging from marginal to extreme. Marginal, non-attainment areas must attain the national 8-hour ozone standard by June 15, 2007.

On July 1, 2004, EPA published a final rule amending the transportation conformity rule to address the new national 8-hour ozone standard. The amended rule states that Plans and TIPs in nonattainment areas must be found to conform against the new standard by one year after the effective date of designation – by June 15, 2005 for 8-hour ozone areas. Conformity for the 1-hour ozone standard will no longer apply in existing 1-hour ozone nonattainment and maintenance areas once the 1-hour ozone standard is revoked; this is expected to occur on June 15, 2005. Furthermore, prior to 8-hour budgets being established, all areas with adequate or approved 1-hour motor vehicle emission budgets must use them to demonstrate conformity with the 8-hour ozone standard, unless it is determined through interagency consultation that using the interim emissions tests is more appropriate. The conformity finding in this report is based on the approved 1-hour motor vehicle emissions budget.

National 8-Hour Carbon Monoxide Standard

In April 1998, the Bay Area was redesignated to a "maintenance area" for the national 8-hour carbon monoxide (CO) standard, having demonstrated attainment of the standards. As a maintenance area, the region must assure continued attainment of the CO standard.

APPROVED MOTOR VEHICLE EMISSIONS BUDGETS

The Bay Area has conformity requirements for both the federal ozone and CO standards. Under these requirements, the Bay Area has to meet a motor vehicle emission "budget" test for Volatile Organic Compounds (VOC), Nitrogen Oxides (NO_X) and CO. To make a positive conformity finding, MTC must demonstrate that the calculated motor vehicle emissions in the region are lower than the approved budgets. As mentioned above, under EPA's new conformity rule for the national 8-hour ozone standard, the existing 1-hour motor vehicle emission budget is to be used for conformity analyses until it is replaced by another budget.

For the ozone precursor emissions VOC and NO_X, the applicable motor vehicle emissions budget was developed for the 2006 attainment year as part of the 2001 Ozone Attainment Plan and was subsequently approved by EPA.

For CO, the applicable motor vehicle emissions budget was developed for the 1998 Revision to the 1996 Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas as part of the State Implement Plan (SIP) for Carbon Monoxide (herein referred to as the 1998 Carbon Monoxide Maintenance Plan).

In July 2004, the CARB submitted to EPA proposed 2004 Revisions to the California State Implementation Plan for Carbon Monoxide (herein referred to as the 2004 Carbon Monoxide Maintenance Plan). This Plan includes new motor vehicle emissions budgets for CO of 1,850 tons per day in 2018. This budget will become effective upon a finding of budget adequacy by EPA, which is expected to occur after March 2005. MTC has 18 months from the effective date of the adequacy finding to re-conform the Plan and TIP.

The motor vehicle emission budgets are listed below:

VOC:	164 tons per day (2006 and beyond)
NOx:	270.3 tons per day (2006 and beyond)
CO:	2,193 tons per day (2010, the last year of the 1998 Revision, and beyond)

On road motor vehicle emissions are analyzed for various horizon years that must not be more than 10 years apart, or more than 10 years from the base year used to validate the model (2000). For this conformity analysis, the horizon years are 2006, 2007, 2015, 2025, and 2030. MTC has prepared separate travel forecasts for the Bay Area for each of these years. Travel forecast data for 2010 (CO) were interpolated between 2006 and 2015. These travel forecasts are then used to calculate motor vehicle emissions.

APPROACH TO THE ANALYSIS

Motor vehicle emissions for future years are estimated using MTC's travel demand forecast model (BAYCAST 2000), which estimates vehicle activity in the Bay Area, and the California Air Resources Board's latest model for determining motor vehicle emissions (EMFAC2002). The MTC travel demand model requires various inputs. MTC has used the latest planning assumptions for the purpose of preparing this TIP conformity analysis.

The MTC travel demand model requires various inputs, including demographic inputs for future population and employment growth in the Bay Area. This conformity analysis uses the socio-economic/land use forecast series *Projections 2003* developed by ABAG and the latest validated version of the MTC travel demand model (BAYCAST, 2000). The ABAG projections incorporate the new regional "Smart Growth" land use assumptions and have been approved for use in the conformity analysis by the US DOT and EPA, subject to preparation of a future monitoring report. This report will be transmitted under separate cover. The projections also reflect the near term effects of the current economic slowdown on job creation in the Bay Area. In addition to the demographic changes occurring over time, the travel demand model determines how changes in the highway, transit, and bicycle network affect people's travel behavior and ultimately the amount of vehicle activity that will occur in the region. The list of transportation projects that will occur in the Bay Area over the next 25 years and affect regional vehicle activity are shown in Appendix B, which shows the 2005 TIP Amendment #05-05 and Transportation 2030 Plan projects that will be operational in 2006/2007, 2015, 2025, and 2030.

Other key modeling inputs and methodological issues are detailed in Appendix C.

Motor vehicle emissions are then calculated by using the vehicle activity outputs from MTC's travel demand forecasting model for the various analysis years, together with the California Air Resources Board (ARB)'s latest motor vehicle emission model (EMFAC2002 version 2.2, April 23, 2003). EMFAC2002 accounts for the effectiveness of the State's vehicle inspection and maintenance program, called Enhanced Smog Check Program in the Bay Area. ARB is also working on a mobile source measure for low pressure evaporative testing of vehicles, and this measure, will be implemented by 2006 and further reduce mobile source emissions.

Because of differences between ARB's estimate of Bay Area Vehicle Miles of Travel (VMT) and the VMT estimates from MTC's travel demand forecast model, MTC adjusts the regional VMT forecasts (both regional and county level) upward after the initial vehicle activity forecasts are prepared. The process generally involves using the MTC model-predicted VMT growth rates and applying these growth rates to ARB's 2000 base year VMT. To account for this higher VMT in the emission calculations, MTC adjusts the vehicle populations (by county) in EMFAC 2002 per ARB's *Recommended Methods for Use of EMFAC2002 to Develop Motor Vehicle Emissions*

Budgets and Assess Conformity (http://www.arb.ca.gov/planning/sip/emfac2002/emfac2002.htm). This methodology also ensures that evaporative hydrocarbon emissions are not underestimated.

In addition to regional and county VMT estimates, the amount of VMT occurring at different speeds is critical to the estimation of motor vehicle emissions. New speed distributions for 2006, 2007, 2015, 2025 and 2030 were applied to passenger cars (PC), light-duty trucks (T1, T2), medium-duty trucks (T3), and motorcycles (mcy) in EMFAC 2002. EMFAC2002 model "default" values were used for all other vehicle types (such as heavy duty trucks) and times of day. Separate peak period speed distributions were utilized for the AM and PM peak periods, while off-peak period speed distributions were employed during the hours representing the 18 off-peak hours of the daily travel demand assignment.

CONSULTATION PROCESS

MTC has consulted on the preparation of the RTP and TIP conformity analysis and other conformity related issues with the Bay Area's Air Quality Conformity Task Force. The Conformity Task Force reviews the assumptions going into the analysis, the results, and consults on TCM implementation issues. The Conformity Task Force is composed of representatives of U.S. EPA, ARB, FHWA, FTA, Caltrans, MTC, BAAQMD, ABAG, the nine county Congestion Management Agencies, and Bay Area transit operators. The meetings are open to the public and are regularly attended by interested members of the public. Topics covered in past meetings of this group include the following:

March 2004

- Use of Smart Growth Land use (Projections 2003) in Conformity Analysis/Monitoring Report
- Conformity Analysis Assumptions for the 2005 TIP
- Proposed Revisions to Conformity SIP/Interagency Consultation Procedures
- MTC/SACOG MOU on Conformity

May 2004

- Draft Conformity Analysis for 2005 TIP
- MTC/SACOG MOU on Conformity
- Proposed Revisions to the SIP-General TCM Substitution Language

June 2004

- Final Conformity Analysis for 2005 TIP
- Proposed Revisions to Conformity SIP/Interagency Consultation Procedures
- Proposed TCM Substitution Language and Guidance

September 2004

- Approach, Assumptions, and Schedule for the Conformity Analysis for the Transportation 2030 Plan and 2005 Transportation Improvement Program/Amendment #05-05
- Discussion of Regional Vehicle Miles Traveled (VMT) Reconciliation with California Air Resources Board (ARB)

December 2004

- Draft Conformity Analysis for the Transportation 2030 Plan and the 2005 Transportation Improvement Program/Amendment #05-05
- ABAG's Smart Growth Monitoring Report and Projections 2005

COMPARISON OF MOTOR VEHICLE EMISSIONS TO BUDGETS

As explained earlier, motor vehicle emissions budgets are established in the SIP for VOCs, NOx and carbon monoxide (CO). To make a positive conformity finding, the regional motor vehicle emissions must be equal to or less than these budgets. The results of the vehicle activity forecasts and motor vehicle emission calculations are shown below for each separate analysis year. For VOC and NOx, the motor vehicle emission budget also reflects anticipated emission reductions from five Transportation Control Measures (TCMs) incorporated in the 2001 Ozone Attainment Plan (Table 1).

TABLE 1
VOC AND NO_X EMISSIONS BUDGETS FROM 2001 OZONE ATTAINMENT PLAN (TONS/DAY)
(SF BAY AREA-EMFAC 2000)

VOC	
2006 On Road Motor Vehicle Emissions	168.5
2006 Mobile Source Control Measure Benefits	(4.0)
2006 TCM Benefits	(0.5)
2006 Emissions Budget	164.0
NO_X	
2006 On Road Motor Vehicle Emissions	271.0
2006 TCM Benefits	(0.7)
2006 Emissions Budget	270.3

TABLE 2
VEHICLE ACTIVITY FORECASTS

	2006	2007	2015	2025	2030
Vehicles in Use	5,174,552	5,254,933	5,980,372	6,794,924	7,214,686
Daily VMT (1000s)	175,634	177,996	198,168	219,917	231,159
Engine Starts	34,497,645	34,966,827	39,133,333	43,459,300	45,629,130

Carbon Monoxide Maintenance Plan Budget

The budget for carbon monoxide is derived from the 1998 Carbon Monoxide Maintenance Plan and is 2,193 tons per day for 2010 and beyond.

Comparison of Estimated Regional Motor Vehicle Emissions to the Budget

The motor vehicle activity forecasts for the Transportation 2030 Plan and 2005 TIP/Amendment #05-05 for the various horizon years are converted to motor vehicle emission estimates by MTC using EMFAC2002 (version 2.2, April 23, 2003). EMFAC2002 includes the effects of the recently implemented (October 2003) enhanced Inspection/Maintenance program for the Bay Area with Test-Only stations (AB 2637, Cardoza, 2002). ARB estimates that the emission reductions in the Bay Area in 2006 from this enhanced Smog Check program are 10 tons per day for VOC and 16 tons per day for NOx. In addition, ARB continues to develop one of the mobile source control measures in the budget – low pressure evaporative testing, which should be operational by 2006.

Table 3A and 3B compares the results of the various analyses with the applicable budgets. The analyses indicate that the motor vehicle emissions are substantially below the budget, due in large part to recent improvements in ARB's latest EMFAC model which reflect the effects of cleaner vehicles in the California fleet and the enhanced Smog Check program now in effect in the Bay Area. With respect to the new Maintenance Plan motor vehicle emission budget that will come into effect after March 2005 for CO, Table 3B shows that calculated motor vehicle emissions will be well below the new budget of 1,850 tons per day in 2018 as well.

The estimated effectiveness of the various Transportation Control Measures, given their current implementation status is shown in Table 4. They are expected to achieve the required cumulative total emission reductions of 0.5 tons per day of VOC and 0.7 tons per day of NOx by 2006.

TABLE 3A
EMISSIONS BUDGET COMPARISONS FOR OZONE
(TONS/DAY WITH BUDGETS BASED ON SF BAY AREA-EMFAC 2000 AND ON ROAD MOTOR VEHICLE EMISSIONS USING MORE CURRENT EMFAC 2002, V2.2)

Year	VOC Budget	On-Road Motor Vehicles VOC	TCMs*	Net Emissions
2006	164.0	129.5	(0.3)	129.2
2007	164.0	119.4	(0.3)	119.4
2015	164.0	69.9	(0.3)	69.6
2025	164.0	44.9	(0.3)	44.6
2030	164.0	38.0	(0.3)	37.7

Year	NO_X Budget	On-Road Motor Vehicles NO_X	TCMs*	Net Emissions
2006	270.3	253.7	(0.5)	253.2
2007	270.3	235.0	(0.5)	234.8
2015	270.3	125.6	(0.5)	125.1
2025	270.3	67.3	(0.5)	66.8
2030	270.3	55.4	(0.5)	54.9

*The transit services for TCM A Regional Express Bus Program were modeled. The emission benefits from TCM A are therefore included in the On-Road Motor Vehicles VOC and NOx emission inventories for 2006 and beyond.

TABLE 3B
EMISSIONS BUDGET COMPARISONS FOR CARBON MONOXIDE

Year	1998 CO Budget*	Estimated CO
2006	2,193	1,352.3
2010 (interpolated)	2,193	1,046.1
2015	2,193	663.3
2025	2,193	353.8
2030	2,193	295.8

* *1998 Revision to the 1996 Carbon Monoxide Maintenance Plan for 10 Federal Planning Areas*

TABLE 4
EMISSIONS REDUCTIONS FOR TRANSPORTATION CONTROL MEASURES (TCMS) A – E IN STATE IMPLEMENTATION PLAN THROUGH NOVEMBER 2004 (TONS PER DAY)

TCM	VOC Emission Reductions through November 2004	NOx Emission Reductions through November 2004
TCM A Regional Express Bus Program	0.16	0.16
TCM B Bicycle/Pedestrian Program	0.03	0.02
TCM C Transportation for Livable Communities	0.06	0.10
TCM D Expansion of Freeway Service Patrol	0.10	0.25
TCM E Transit Access to Airports	0.08	0.12
Total Reductions	0.43	0.65

TRANSPORTATION CONTROL MEASURES

HISTORY OF TRANSPORTATION CONTROL MEASURES

Transportation control measures (TCMs) are strategies to reduce vehicle emissions. They include such strategies as improved transit service and transit coordination, ridesharing services and new carpool lanes, signal timing, freeway incident management, increased gas taxes and bridge tolls to encourage use of alternative modes, etc. With the exception of the five new TCMs (A-E), the original set of TCMs have been completed. The TCMs were added over successive revisions to the SIP (see Table 5). For more information on TCMs 1-28, which are completed, see the last *Transportation Air Quality Conformity Analysis for the 2001 Regional Transportation Plan and FY 2001 Transportation Improvement Program Amendment 01-32 (February 2002)*. This report can be found in the MTC/ABAG Library.

- Twelve (12) ozone measures were originally listed in the 1982 Bay Area Air Quality Plan.

- In response to a 1990 lawsuit in the federal District Court, sixteen (16) additional TCMs were subsequently adopted by MTC in February 1990 as contingency measures to bring the region back on the "Reasonable Further Progress" (RFP) line. The Federal District order issued on May 11, 1992, found that these contingency TCMs were sufficient to bring the region back on the RFP track anticipated in the SIP. These measures became part of the SIP when U.S. EPA approved the 1994 Ozone Maintenance Plan.

- Two (2) transportation control measures from the 1982 Bay Area Air Quality Plan apply to Carbon Monoxide control strategies, for which the region is in attainment with the federal standard, and primarily targeted downtown San Jose (which had the most significant CO

problem at that time.) MTC also adopted a set of TCM enhancements in November 1991 to eliminate a shortfall in regional carbon monoxide emissions identified in the District Court's April 19, 1991 order. Carbon monoxide standards have been achieved primarily through the use of oxygenated/reformulated fuels in cars and with improvements in the Smog Check program.

- As part of EPA's partial approval/partial disapproval of the 1999 Ozone Attainment Plan, four (4) TCMs were deleted from the ozone plan (but two of these remain in the Carbon Monoxide Maintenance Plan).

- Five (5) new Transportation Control Measures were adopted as part of the new 2001 1-Hour Ozone Attainment Plan and are fully funded in the TIP and 2001 Regional Transportation Plan.

With respect to TCM 2 from the 1982 SIP, there has been a protracted debate, leading to a citizens lawsuit in federal court, about the obligations associated with this TCM. On April 6, 2004 MTC prevailed in the U.S. Court of Appeals for the Ninth Circuit which concluded that TCM 2 does not impose any additional enforceable obligation on MTC to increase ridership on public transit ridership by 15% over 1982-83 levels by November 2006 (Bayview Hunters Point Community Advocates v. Metropolitan Transportation Com'n, (2004 WL 728247, 4 Cal. Daily Op. Serv. 2919, 2004 Daily Journal D.A.R. 4209, 9th Cir.(Cal.), Apr 06, 2004)). Thus TCM 2 has been resolved, and there are no further implementation issues to address in this TCM.

Table 5
TRANSPORTATION CONTROL MEASURES (TCMS) IN THE STATE IMPLEMENTATION PLAN

TCM	*Description*
Original TCMs from 1982 Bay Area Air Quality Plan	
TCM 1	Reaffirm Commitment to 28 percent Transit Ridership Increase Between 1978 and 1983
TCM 2	Support Post-1983 Improvements in the Operators' Five-Year Plans and, After Consultation with the Operators, Adopt Ridership Increase Target for the Period 1983 through 1987
TCM 3	Seek to Expand and Improve Public Transit Beyond Committed Levels
TCM 4	High Occupancy Vehicle (HOV) Lanes and Ramp Metering
TCM 5	Support RIDES Efforts
TCM 6*	Continue Efforts to Obtain Funding to Support Long Range Transit Improvements
TCM 7	Preferential Parking
TCM 8	Shared Use Park and Ride Lots
TCM 9	Expand Commute Alternatives Program
TCM 10	Information Program for Local Governments
TCM 11**	Gasoline Conservation Awareness Program (GasCAP)
TCM 12**	Santa Clara County Commuter Transportation Program
Contingency Plan TCMs Adopted by MTC in February 1990 (MTC Resolution 2131)	
TCM 13	Increase Bridge Tolls to $1.00 on All Bridges
TCM 14	Bay Bridge Surcharge of $1.00
TCM 15	Increase State Gas Tax by 9 Cents
TCM 16*	Implement MTC Resolution 1876, Revised — New Rail Starts
TCM 17	Continue Post-Earthquake Transit Services
TCM 18	Sacramento-Bay Area Amtrak Service
TCM 19	Upgrade Caltrain Service
TCM 20	Regional HOV System Plan
TCM 21	Regional Transit Coordination
TCM 22	Expand Regional Transit Connection Ticket Distribution
TCM 23	Employer Audits
TCM 24	Expand Signal Timing Program to New Cities
TCM 25	Maintain Existing Signal Timing Programs
TCM 26	Incident Management on Bay Area Freeways
TCM 27	Update MTC Guidance on Development of Local TSM Programs
TCM 28	Local Transportation Systems Management (TSM) Initiatives
New TCMs in 2001 Ozone Attainment Plan	
TCM A	Regional Express Bus Program
TCM B	Bicycle/Pedestrian Program
TCM C	Transportation for Livable Communities
TCM D	Expansion of Freeway Service Patrol
TCM E	Transit Access to Airports

*Deleted by EPA action from ozone plan
**Deleted by EPA action from ozone plan, but retained in Carbon Monoxide Maintenance Plan.

Source: Bay Area Air Quality Management District, Metropolitan Transportation Commission, 2001.

STATUS OF TRANSPORTATION CONTROL MEASURES

TCMs A-E were approved into the SIP as part of EPA's Finding of Attainment for the San Francisco Bay Area (April 2004). The conformity analysis must demonstrate that TCMs are being implemented on schedule (40 CFR 93.113). TCMs A-E have specific implementation steps which are used to determine progress in advancing these TCMs (see Table 6). The TCMs are to be implemented by 2006 and are on schedule.

TABLE 6
FEDERAL TRANSPORTATION CONTROL MEASURES FOR OZONE

#	TCM	Description	Ozone Attainment Plan Implementation Schedule	Implementation Status
A	Regional Express Bus Program	Program includes purchase of approximately 90 low emission buses to operate new or enhanced express bus services. Buses will meet all applicable ARB standards, and will include particulate traps or filters. MTC will approve $40 million in funding to various transit operators for bus acquisition. Program assumes transit operators can sustain service for a five year period. Actual emission reductions will be determined based on routes selected by MTC.	FY 2003. Complete once $40 million in funding pursuant to Government Code Section 14556.40 is approved by the California Transportation Commission and obligated by bus operators	$40 million for this program was allocated by the CTC in August, 2001. The participating transit operators have ordered and received a total of 94 buses. Four of the initial proposed projects no longer appear viable; the buses ordered for these will be redeployed in alternate services. All buses are expected to be operational by 2006.
B	Bicycle / Pedestrian Program	Fund high priority projects in countywide plans consistent with TDA funding availability. MTC would fund only projects that are exempt from CEQA, have no significant environmental impacts, or adequately mitigate any adverse environmental impacts. Actual emission reductions will be determined based on the projects funded.	FY 2004 – 2006. Complete once $15 million in TDA Article 3 is allocated by MTC.	MTC anticipates allocating about half of the $15 million in FY2004 and FY2005. Should less than the $15 million be allocated during those two years, then the remainder would be allocated during FY2006.

#	TCM	Description	Ozone Attainment Plan Implementation Schedule	Implementation Status
C	Transportation for Livable Communities (TLC)	Program provides planning grants, technical assistance, and capital grants to help cities and nonprofit agencies link transportation projects with community plans. MTC would fund only projects that are exempt from CEQA, have no significant environmental impacts, or adequately mitigate any adverse environmental impacts. Actual emission reductions will be based on the projects funded.	FY 2004 – 2006. Complete once $27 million in TLC grant funding is approved by MTC	In December 2003, the Commission reaffirmed its commitment of $27 million annually over 25 years for the TLC program as part of Phase 1 of the Transportation 2030 Plan. MTC anticipates approving a total $27 million in TLC grant funding by FY 2006. In November 2004, MTC approved $500,000 for regional TLC Community Design Planning Program, and by December 2004, MTC will approve $18 million in TLC funding for the regional TLC Capital Program. By June 2006, the county Congestion Management Agencies (CMAs) will implement the remaining $9 million in their county-level TLC Capital Program.
D	Additional Freeway Service Patrol	Operation of 55 lane miles of new roving tow truck patrols beyond routes which existed in 2000. TCM commitment would be satisfied by any combination for routes adding 55 miles. Tow trucks used in service are new vehicles meeting all applicable ARB standards.	FY 2001. Complete by maintaining increase in FSP mileage through December 2006	FSP continues to maintain the operation of the 55 lane miles of new roving tow truck coverage. No problems are anticipated in maintaining this level of service through 2006. .
E	Transit Access to Airports	Take credit for emission reductions from air passengers who use BART to SFO, as these reductions are not included in the Baseline.	BART – SFO service to start in FY 2003. Complete by maintaining service through December 2006	Service began June, 2003. Service adjustments were made in September, 2004 to improve productivity and to increase the number of peak period trains stopping at the Airport station.

RESPONSE TO PUBLIC COMMENTS

This draft conformity analysis was released for a 30-day public review and comment period beginning on December 7, 2004 and ending on January 14, 2005. MTC received no written comments on the draft conformity analysis. The final conformity analysis will be presented for approval at the February 11, 2005 Planning and Operations Committee and February 23, 2005 Commission meetings (MTC Resolution 3679). The final conformity analysis will then be submitted to Federal Highway Administration and Federal Transit Administration for joint review as required by 40 CFR 93.104 and 23 CFR 450.322 of the FHWA/FTA Statewide and Metropolitan Planning Rule.

CONFORMITY FINDINGS

Based on the analysis, the following conformity findings are made:

- This conformity assessment was conducted consistent with EPA's regulations and with the Bay Area Air Quality Conformity Procedures adopted by MTC as Resolution No. 3075.

- The Transportation 2030 Plan and 2005 TIP/Amendment #05-05 provide for implementation of TCMs pursuant to the following federal regulation:

  (1) An examination of the specific steps and funding source(s) needed to fully implement each TCM indicates that TCMs which are eligible for funding under title 23 U.S.C. or the Federal Transit Laws are on or ahead of the schedule established in the applicable implementation plan, or, if such TCMs are behind the schedule established in the applicable implementation plan, the MPO and DOT have determined that past obstacles to implementation of the TCMs have been identified and have been or are being overcome, and that all State and local agencies with influence over approvals or funding for TCMs are giving maximum priority to approval or funding to TCMs over other projects within their control, including projects in locations outside the non-attainment or maintenance area.

  (2) If TCMs in the applicable implementation plan have previously been programmed for Federal funding but the funds have not been obligated and the TCMs are behind the schedule in the implementation plan, then the TIP cannot be found to conform if the funds intended for those TCMs are reallocated to projects in the TIP other than TCMs, or if there are no other TCMs in the TIP, if the funds are reallocated to projects in the TIP other than projects which are eligible for Federal funding intended for air quality improvements projects, e.g., the Congestion Mitigation and Air Quality Improvement Program.

  (3) Nothing in the TIP may interfere with the implementation of any TCM in the applicable implementation plan. (40 CFR Part 93.113(c)).

- For carbon monoxide, motor vehicle emissions in the Transportation 2030 Plan and 2005 TIP/Amendment #05-05 are lower than the transportation conformity budget in the SIP.

- For Volatile Organic Compounds (VOC) and Nitrogen Oxides (NOx), motor vehicle emissions in the Transportation 2030 Plan and 2005 TIP/Amendment #05-05 are also lower than the applicable motor vehicle emission budgets for both the national 1-hour and 8-hour ozone standards.

APPENDIX A

LIST OF PROJECTS TO BE AMENDED INTO THE 2005 TRANSPORTATION IMPROVEMENT PROGRAM/ AMENDMENT #05-05

Appendix A: 2005 TIP - Amendment No. 2005-05

Sponsor	Mode	TIP ID	RTP ID	Project Name	Description of Change	Funding Change
Alameda Contra Costa Transit District (AC Transit)	Transit	ALA050034	22240	Express Bus South	Amend in new RM2 project.	$5,300,000.00
Alameda County	Local Rd	ALA050035	94522	Sidewalk Improv. in Cherryland/Ashland/CV	Amend in new project funded with federal earmark.	$1,410,000.00
Alameda County Congestion Management Agency	Transit	ALA050033	22240	Ardenwood Blvd Park & Ride Lot	Amend in new RM2 project.	$3,100,000.00
Bay Area Rapid Transit	Transit	BRT050003	22636	Transbay Tube Seismic Retrofit	Amend-in new project funded with RM2 and BART measure funds.	$325,378,000.00
Bay Area Rapid Transit	Transit	SF-050014	94635	BART/MUNI Direct Connection Platform	Amend-In new RM2 project.	$3,000,000.00
Caltrain	Transit	SM-050030	21623	San Bruno Station Relocation & Improv.	Amend in new RM2 project.	$115,000,000.00
Caltrans	Local Rd	SOL050032	21869	Ulatis Creek Bridge Replacement	Amend-in New HBRR project.	$1,404,000.00
Caltrans	State Hwy	CC-050026	98211	I-80 EB HOV Ln - Rt 4 to Carquinez Bridge	Amend-In new RM2 project.	$50,000,000.00
Caltrans	State Hwy	SM-050027	21603	US 101/Woodside Interchange Improvement	Amend in new regionally significant locally funded project.	$56,000,000.00
Caltrans	State Hwy	SM-050028	21602	US 101/Broadway Interchange Improvement	Amend in new regionally significant locally funded project.	$43,300,000.00
Caltrans	State Hwy	SON050015	22656	E. Washington/US 101 Interchange	Project split from Sonoma Narrows project (See MRN990055).	$14,542,000.00
Capitol Corridor Joint Powers Authority	Transit	SOL050028	22988	Benicia Siding Extension	Amend in new RM2 project.	$7,750,000.00
Central Contra Costa Transit Agency (CCCTA)	Transit	CC-050027	94558	Diablo Valley College Transit Center	Amend in new regionally significant locally funded project.	$500,000.00
City of Antioch	State Hwy	CC-030026	22600	Sommersville Bridge Replacement	Revise HBRR funding.	$1,335,000.00

Appendix A: 2005 TIP - Amendment No. 2005-05

Sponsor	Mode	TIP ID	RTP ID	Project Name	Description of Change	Funding Change
City of Benicia	State Hwy	SOL050030	22985	Park/Industrial Park and Ride Facility	Amend in new RM2 project.	$1,500,000.00
City of Brentwood	Local Rd	CC-050030	98198	Vasco Road Safety Improvements	Amend in new project funded with federal earmark.	$1,896,000.00
City of Fairfield	Transit	SOL050029	94148	Fairfield/Vacaville Intermodal Station	Amend in new RM2 project.	$17,250,000.00
City of San Jose	Bike Ped	SCL050039		Almaden Expressway Ped. Overcrossing	Amend in new project funded with federal earmark.	$6,196,000.00
City of Walnut Creek	Bike Ped	CC-050031	21202	Ygnacio Valley Road Ped/Bike Trail.	Amend in new project funded with federal earmark.	$1,001,000.00
Contra Costa Transportation Authority	State Hwy	CC-050028	22353	I-680 HOV Lane Gap Closure	Amend-in new RM2 project.	$14,000,000.00
Eastern Contra Costa Transit Agency (Tri-Delta)	Transit	CC-050029	21204	Park and Ride Facility Land Purchase	Amend in new project.	$729,000.00
Federal Highway Administration (FHWA)	Local Rd	MRN050016	94636	West Bunker & Mitchell Rd Rehab	Amend In new Exempt project.	$6,502,313.00
Golden Gate Bridge, Highway and Transit District	Transit	MRN050015		4 Replacement Express Buses	Amend-In new RM2 project.	$1,600,000.00
Metropolitan Transportation Commission (MTC)	Transit	MTC050020	21006	Real-time transit information Grant Program	Amend-in new exempt RM2 project.	$20,000,000.00
Metropolitan Transportation Commission (MTC)	Transit	MTC050021	94027	Safe Routes to Transit	Amend-In new RM2 project.	$20,000,000.00
Metropolitan Transportation Commission (MTC)	Transit	MTC050022	21005	Integrated Fare Structure Program	Amend-In new RM2 project.	$1,500,000.00
Metropolitan Transportation Commission (MTC)	Transit	MTC050023	21066	High Speed Rail: Ridership Forecasts Study	Amend-In new RM2 project.	$2,000,000.00

Appendix A: 2005 TIP - Amendment No. 2005-05

Sponsor	Mode	TIP ID	RTP ID	Project Name	Description of Change	Funding Change
Metropolitan Transportation Commission (MTC)	Transit	MTC050024	21066	High Speed Rail: Integration Study	Amend-in new RM2 project.	$1,000,000.00
Napa County Transportation Planning Agency	Transit	NAP050008	94578	Vallejo Ferry Express Commuter Service	Amend-In new RM2 project.	$2,000,000.00
Napa Vine	Transit	NAP050009	22243	Park & Ride Lots in Napa County	Amend in New RM2 project.	$3,030,000.00
Santa Clara County	Bike Ped	SCL050038		Stevens Creek Trail - Segment R1a		$232,000.00
Solano County Transportation Authority	State Hwy	SOL050031	21807	I-80/I-680 I/C HOV lanes	Amend in new RM2 project.	$78,448,000.00
Sonoma County Transit	Transit	SON050014	22001	SMART Extension to Larkspur or San Quentin	Amend in new RM2 project.	$42,700,000.00
Valley Transit Authority (Santa Clara Trans Dist)	State Hwy	SCL050033	21723	US-101/Tully Road Interchange Modifications	Amend in new regionally significant locally funded project.	$34,307,200.00
Valley Transit Authority (Santa Clara Trans Dist)	State Hwy	SCL050034	22142	US-101/Capitol-Yerba Buena Interchange Mods	Amend in new regionally significant locally funded project.	$35,443,200.00
Valley Transit Authority (Santa Clara Trans Dist)	State Hwy	SCL050036	22780	SR-17 Auxillary Lane Project	Amend in new regionally significant locally funded project.	$15,125,000.00
Valley Transit Authority (Santa Clara Trans Dist)	Transit	SCL050035	98121	Caltrain Service Improvement Project in SCL	Amend in new regionally significant locally funded project.	$43,500,000.00
Water Transit Authority	Transit	ALA050030	22509	Commute Ferry Service - Alameda	Amend-in New RM2 project.	$13,000,000.00
Water Transit Authority	Transit	ALA050031	22511	Commute Ferry Service - Berkeley	Amend-in New RM2 project.	$23,000,000.00
Water Transit Authority	Transit	SF-050015	22006	Downtown Ferry Terminal Improvements	Amend in new RM2 project.	$30,000,000.00
Water Transit Authority	Transit	SF-050016		Commute Ferry Service for South San Francisco	Amend in new RM2 project.	$37,986,100.00
Water Transit Authority	Transit	SF-050017	22006	Spare Vessels	Amend in new RM2 project.	$12,000,000.00

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Sponsor	Mode	TIP ID	RTP ID	Project Name	Description of Change	Funding Change
Alameda Contra Costa Transit District (AC Transit)	Transit	ALA050017	94526	Enhanced Bus - Telegraph/International/East 14th	Amend in RM2 funds and refine project name and description.	$64,400,000.00
Alameda Contra Costa Transit District (AC Transit)	Transit	ALA990020	94526	Bus Engine and Transmission Rehal	Reconcile programming to year of obligation. Change year of programming for $628km in STP funds from FY05 to FY04. Funds were obligated late in FY04.	$0.00
Alameda County Congestion Management Agency	Local Rd	ALA990088	21145	I-880 Smart Corridor	Reconcile programming to year of obligation. Change year of programming for $284k in STP funds from FY05 to FY04. Funds were obligated late in FY04.	$0.00
Alameda County Congestion Management Agency	State Hwy	ALA050018	94522	I-880 NB / Maritime Street HOV On-Ramp	Amend in RM2 funds.	$3,215,000.00
Alameda County Congestion Management Agency	Transit	ALA050006	21885	I-580 (Tri Valley) Rapid Transit Corridor Improve	Amend in RM2 funds.	$64,000,000.00
Bay Area Rapid Transit	Transit	ALA050015	21132	Warm Springs Extension	Amend in RM2 funds. Change fund source from other local to RM2 for $85m in FY08 & FY09.	$0.00
Bay Area Rapid Transit	Transit	BRT030006	21005	TransLink®Fare Collection System	Amend in RM2 funds.	$12,680,000.00
Bay Area Rapid Transit	Transit	BRT990002	21131	BART Oakland Airport Connector	Amend in RM2 funds - Change fund source from other local to RM2 for $30m in fy05 and FY06.	$0.00
Bay Area Rapid Transit	Transit	BRT991003	94003	BART Earthquake Safety Program	Remove RM2 funding of $11m from this project plus $8m in prior year TCRP funds and reprogram at BRT050003 - Transbay Tube Seismic Retrofit Project.	($18,666,000.00)
Bay Area Rapid Transit	Transit	CC-030003	98197	Richmond BART Parking Structure	Amend STIP project for financial constraint purposes. Defer $2M RTIP from FY07 to FY08 and amend-in $2M in Local funds.	$2,000,000.00

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Sponsor	Mode	TIP ID	RTP ID	Project Name	Description of Change	Funding Change
Bay Area Rapid Transit	Transit	CC-050004	94556	Central Contra Costa BART Crossover	Amend in RM2 funds.	$24,000,000.00
Caltrain	Transit	SM-030024	21622	S. SF Caltrain Station Relocation & Track Imps	Combine this project with SM-030030 S.SF Station Relocation & Track Improvement. Same project listed twice.	($5,822,000.00)
Caltrans	Local Rd	SCL050006	21868	Mathilda Avenue Bridge Replacement.	Revise HBRR funding.	($160,000.00)
Caltrans	Local Rd	VAR991007		Lump Sum Local Bridge Replacement	Amend-in HBRR-State Funds.	$153,992,000.00
Caltrans	State Hwy	ALA010005	21126	SR 84 Westbound HOV On-Ramp at Newark Blvd.	Amend in RM2 funds.	$4,612,000.00
Caltrans	State Hwy	ALA010006	21125	SR 84 WB HOV Lane Extension	Amend in RM2 funds.	$5,071,000.00
Caltrans	State Hwy	CC-010002	21206	Caldecott Tunnel 4th Bore	Amend in RM2 funds and revise project name.	$62,000,000.00
Caltrans	State Hwy	SOL050006	22899	Suisun Valley Rd Bridge Replacement	Revise HBRR funding.	$24,000.00
Caltrans	State Hwy	SON050001	22194	Mark West Creek Bridge	Revise HBRR funding. Delay Construction phase until FY08.	$0.00
Caltrans	Toll Bridge	B-B970001	94541	Benicia-Martinez Bridge	Amend in RM2 funds.	$50,000,000.00
Capitol Corridor Joint Powers Authority	Transit	SOL010030	21816	Bahia Viaduct Track Upgrade	Amend STIP funds for financial constraint purposes. Defer STIP funds of $1m from FY07 to FY08.	($500,000.00)
Central Contra Costa Transit Agency (CCCTA)	Transit	CC-030021	21434	CCCTA Regional Express Bus Operations	Reconcile programming to year of obligation. Reprogram $208k in CMAQ funds from FY05 to FY04. Funds were obligated in FY04.	$0.00
Central Contra Costa Transit Agency (CCCTA)	Transit	CC-050010	94558	Martinez Transit Center	Amend-in additional local measure funds and change fund source from RM2 to other local funds.	$1,052,000.00
City of Antioch	Local Rd	CC-050002	94046	Wilbur Ave. Bridge Widening	Revise HBRR funding.	$652,000.00

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Sponsor	Mode	TIP ID	RTP ID	Project Name	Description of Change	Funding Change
City of Benicia	Transit	SOL010031	21981	Benicia Intermodal Transportation Station	Amend in RM2 funds and amend STIP project for financial constriant purposes. Defer $1.1m in STIP funds from FY07 to FY08.	$3,000,000.00
City of Berkeley	Local Rd	ALA010027	94027	Berkeley Santa Fe RR Bike/Ped Path	Reconcile programming to year of obligation. Change year of programming for $823k in STP funds from FY06 to FY04. Funds were obligated late in FY04.	$0.00
City of Fairfield	Transit	SOL030002	21981	Fairfield/Vacaville Intermodal Rail Station	Amend STIP project for financial constraint purposes. Defer $23M RTIP from FY07 to FY08 and amend-in additional Local funds. Add FY 2005 FTA 5309 BUS earmark in the amount of $485,888.	$608,000.00
City of Fairfield	Transit	SOL991068	94679	Fairfield Transportation Center-Phase II	Amend in RM2 funds.	$7,400,000.00
City of Fremont	Local Rd	ALA990014	98216	Washington Blvd/Paseo Padre Grade Separation	Revise project funding. Reduce local funds by $10m and reprogram toll bridge funds from FY05 to FY 06 & FY07.	($10,000,000.00)
City of Petaluma	Local Rd	SON010016	98557	Downtown River Apart. Improvements.	Reconcile programming to year of obligation. Change programming of $266k in STP funds from FY05 to FY04. Funds were obligated late in FY04.	$0.00
City of Richmond	Transit	CC-030001	21208	Richmond Prkwy Transit Center Parking	Amend in RM2 funds.	$15,100,000.00
City of San Francisco	Transit	SF-010015	21342	Transbay Terminal Replacement Project.	Amend in RM2 funds.	($1,675,000.00)

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Sponsor	Mode	TIP ID	RTP ID	Project Name	Description of Change	Funding Change
City of San Jose	Local Rd	SCL991007	94109	Stevens Creek Blvd/Winchester Blvd ITS	Reconcile programming to year of obligation. Change year of programming for $1m in CMAQ funds from FY05 to FY04. Funds were obligated late in FY04.	$0.00
City of San Leandro	Local Rd	ALA030006	21011	W. Estudillo St. Streetscape & BART Connections	Reconcile programming to year of obligation. Change $855k in TEA funds from FY05 to FY04. Funds were obligated late in FY04.	$0.00
City of San Rafael	Local Rd	MRN030002	21011	Medway/Canal Enhancements	Reconcile programming to year of obligation. Change year of programming for $820k in TEA funds and $80k CMAQ funds from FY05 to FY04. Funds were obligated late in FY04.	$0.00
City of Suisun City	Local Rd	SOL030004	21011	Driftwood Drive Pedestrian Way	Reconcile programming to year of obligation. Change programming of $310k in TEA funds from FY05 to FY04.	$0.00
City of Vacaville	Transit	SOL050013	98168	Vacaville Intermodal Station	Amend in RM2 funds.	$7,400,000.00
City of Vallejo	Transit	SOL050012	94679	Vallejo Curtola Transit Center	Amend in RM2 Funds.	$11,000,000.00
City of Vallejo	Transit	SOL950035	21817	Vallejo Ferry Terminal Intermodal Facility	Amend in RM2 funds and defer STIP funds in FY07 of $6.1m to FY08. Also amend in FY 2005 FTA 5309 BUS earmark in the amount of $1,214,724.	$29,519,000.00
Golden Gate Bridge, Highway and Transit District	Local Rd	MRN970016	21012	Golden Gate Seismic Retrofit, Ph: 1-3A	Amend in $5m of FY 05 Federal Discretionary Bridge Program funds.	($132,540,000.00)
Marin Congestion Management Agency	State Hwy	MRN050001	98178	Greenbrae Interchange Improvement	Amend in RM2 funds.	$45,415,000.00

Appendix A: 2005 TIP - Amendment No. 2005-05

Sponsor	Mode	TIP ID	RTP ID	Project Name	Description of Change	Funding Change
Metropolitan Transportation Commission (MTC)	Local Rd	ALA050019	22769	I-880 North, Safety Improvements	Amend in RM2 funds and revise project funding and milestones.	$8,900,000.00
Metropolitan Transportation Commission (MTC)	Local Rd	SF-050004	94639	City CarShare	Amend in RM2 funds.	$2,000,000.00
Metropolitan Transportation Commission (MTC)	Transit	MTC050001	21007	Transit Commute Benefits Promotion	Amend-in RM2 funds and revise existing RM2 funds.	$2,185,000.00
San Francisco Municipal Railway (MUNI)	Transit	SF-99T005	94636	Historic Rail Car rehabilitation.	Amend in RM2 and RTIP-TE funds.	$4,566,000.00
San Mateo County	Local Rd	SM-010042	21859	Bay Road Streetscape Improvements	Reconcile programming to year of obligation. Change programming of $224k in STP funds from FY05 to FY04. Funds were obligated late in FY04. Also archive project.	$0.00
San Mateo County	Local Rd	SM-010043	94101	El Camino Real Pedestrian Improvements	Reconcile programming to year of obligation. Change programming of $205k in CMAQ funds from FY05 to FY04. Funds were obligated late in FY04.	$0.00
San Mateo County	Local Rd	SM-030005	21011	Bay Road Streetscape & Calming Improvements	Reconcile programming to year of obligation. Change programming of $500k in STP funds from FY05 to FY04. Funds were obligated late in FY04.	$0.00
Solano County Transportation Authority	State Hwy	SOL030003	94138	I-80/I-680/SR12 IC/Connector Ph 2	Amend in RM2 funds.	$21,552,000.00
Valley Transit Authority (Santa Clara Trans Dist)	State Hwy	SCL010006	96002	SR-152 Safety Improvement	Amend in FY05 Federal Earmark.	$992,000.00
Water Transit Authority	Transit	SF-050008	21356	WTA Ferry Expansion Studies.	Amend in RM2 funds.	$300,000.00

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Sponsor	Mode	TIP ID	RTP ID	Project Name	Description of Change	Funding Change
Caltrans	State Hwy	ALA990013	94026	Route 238 Northbound Widening	Amend STIP project for financial constraint purposes. Defer $28.2M in RTIP from FY07 to FY08 and amend in other local funds.	$29,089,000.00
Caltrans	State Hwy	CC-010003	94047	I-80 WB HOV Gap Closure	Amend STIP project for financial constraint purposes. Defer STIP funds from FY06 to FY07.	$0.00
Caltrans	State Hwy	MRN990001	94563	Rt 101 HOV Northbound & Southbound HOV Lanes	Amend STIP project for financial constraint purposes. Defer $11.3m in RTIP funds from FY05 to FY06 and $7.5m from FY07 to FY08 and amend-in additional local measure funds.	$20,661,000.00
Caltrans	State Hwy	MRN990055	98147	SR 101 HOV Lanes - Marin/Sonoma Narrows	Split project into two. See SON050015- US 101/East Washington Interchange project.	($5,650,000.00)
Contra Costa Transportation Authority	State Hwy	CC-010009	98142	SR 4 East widening from Loveridge to Somersville	Amend STIP project for financial constraint purposes. Defer RTIP funds and backfill with local measure funds.	$31,035,000.00
Solano County Transportation Authority	Local Rd	SOL990004	94151	I-80 Reliever Route: Jepson Parkway Project	Change programming year for $4.6m in STP funds from FY04 to FY05.	$0.00
Contra Costa Transportation Authority	Transit	CC-050025	21211	E-BART - E. Contra Costa Rail Extension	Revise project scope.	$0.00
					Total Funding Change	1,607,371,813

APPENDIX B

LIST OF ROADWAY AND TRANSIT PROJECTS IN FINANCIALLY CONSTRAINED ELEMENT OF THE TRANSPORTATION 2030 PLAN

Appendix B: Transportation 2030 Financially Constrained Element Projects by County (by analysis year)

RTP ID	Investment*	Project / Program	Complete and Operational By: 2006 / 2007	2015	2025	2030	2005 TIP/ 05-05**	Reg'l Signif.
Alameda								
Alameda 21133	Committed	New West Dublin/Pleasanton BART Station	☑	☐	☐	☐	☐	☑
Alameda 21134	New Commitment	Rapid Bus Transit (RBT) in the San Pablo Corridor	☑	☐	☐	☐	☐	☑
Alameda 21483	Committed	Widen Stevenson Boulevard from I-880 to Blacow Road from 4 lanes to 6 lanes	☑	☐	☐	☐	☐	☐
Alameda 21484	Committed	Widen Kato Road from Warren Avenue to Milmont Drive	☑	☐	☐	☐	☐	☐
Alameda 21488	Committed	Warren Avenue/Warm Springs Boulevard intersection improvements	☑	☐	☐	☐	☐	☐
Alameda 21493	Committed	I-580/I-680 Transportation Operations System (TOS)	☑	☐	☐	☐	☐	☑
Alameda 22038	New Commitment	San Francisco-Oakland Bay Bridge toll plaza HOV bypass lanes	☑	☐	☐	☐	☐	☑
Alameda 22084	New Commitment	Oakland International Aiport North Field access road	☑	☐	☐	☐	☐	☐
Alameda 22770	New Commitment	Traffic signal on Grand Avenue at Rose Avenue/Arroyo Avenue intersection in Piedmont	☑	☐	☐	☐	☐	☐
Alameda 22771	New Commitment	Reconfigure Marin Avenue from San Pablo Avenue to Albany/Berkeley city line from 2 lanes to 1 lanes in each direction to accommodate turn lane and bike lanes	☑	☐	☐	☐	☐	☐
Alameda 22784	Committed	Narrow First Street between P Street and Maple Street from 4 lanes to 2 lanes to calm traffic and accommodate pedestrians	☑	☐	☐	☐	☐	☐
Alameda 22786	Committed	Install ramp metering on all existing ramps along I-580 in Livermore	☑	☐	☐	☐	☐	☑
Alameda 22787	Committed	Realign Isabel/Vallecitos intersection for through movement on Route 84	☑	☐	☐	☐	☐	☑
Alameda 94504	Committed	Construct 4-lane Airport Roadway (mostly on Port of Oakland property) from I-880/98th Avenue interchange to Oakland International Airport and then to Bay Farm Island	☑	☐	☐	☐	☐	☑

*Committed refers to those projects with programmed local, regional, state, or federal funds; New Commitment refers to those projects that will seek discretionary funds to be available over the long term of the Transportation 2030 Plan.
**Projects amended into 2005 TIP (Amendment #05-05), including early phases for some projects with post-2006 completion years.

Appendix B: Transportation 2030 Financially Constrained Element Projects by County (by analysis year)

RTP ID	Investment*	Project / Program	Complete and Operational By: 2006 / 2007	2015	2025	2030	2005 TIP/ 05-05**	Reg'l Signif.
Alameda 21085	New Commitment	I-580 Transportation Operations System (TOS) and ramp metering from the San Joaquin county line to the city of Dublin	☐	☑	☐	☐	☐	☑
Alameda 21101	New Commitment	Extend Tinker Avenue from Webster Street to 5th Avenue (includes Transit Center at College of Alameda)	☐	☑	☐	☐	☐	☐
Alameda 21103	New Commitment	Central Avenue railroad overpass	☐	☑	☐	☐	☐	☐
Alameda 21105	New Commitment	I-580/Isabel interchange improvements (Phases 1 and 2)	☐	☑	☐	☐	☐	☑
Alameda 21107	New Commitment	I-880/High Street interchange improvements	☐	☑	☐	☐	☐	☑
Alameda 21112	New Commitment	Crow Canyon Road safety improvements (Stage 1)	☐	☑	☐	☐	☐	☐
Alameda 21114	Committed	Washington/Paseo Padre Parkway Grade Separation	☐	☑	☐	☐	☐	☐
Alameda 21123	New Commitment	Union City Intermodal Station infrastructure improvements (Phase 2)	☐	☑	☐	☐	☐	☐
Alameda 21125	Committed	Route 84 westbound HOV lane extension from Newark Boulevard to I-880.	☐	☑	☐	☐	☐	☑
Alameda 21126	Committed	Route 84 westbound HOV on-ramp from Newark Boulevard	☐	☑	☐	☐	☐	☑
Alameda 21131	New Commitment	BART-Oakland International Airport connector	☐	☑	☐	☐	☐	☑
Alameda 21132	New Commitment	BART extension to Warm Springs	☐	☑	☐	☐	☐	☑
Alameda 21138	New Commitment	San Leandro BART Station transit village (Phase 1); includes parking structure, kiss-and-ride and bus circulation improvements	☐	☑	☐	☐	☐	☐
Alameda 21139	New Commitment	Vasco Road safety improvements	☐	☑	☐	☐	☐	☐
Alameda 21144	New Commitment	I-80/Gilman Avenue interchange improvements (includes roundabouts)	☐	☑	☐	☐	☐	☐

*Committed refers to those projects with programmed local, regional, state, or federal funds; New Commitment refers to those projects that will seek discretionary funds to be available over the long term of the Transportation 2030 Plan.
**Projects amended into 2005 TIP (Amendment #05-05), including early phases for some projects with post-2006 completion years.

Appendix B: Transportation 2030 Financially Constrained Element Projects by County (by analysis year)

RTP ID	Investment*	Project / Program	Complete and Operational By: 2006 / 2007	2015	2025	2030	2005 TIP/ 05-05**	Reg'l Signif.
Alameda 21145	New Commitment	Corridor Management Program: signal interconnect, transit priority, SMART corridors and other improvements	☐	☑	☐	☐	☐	☐
Alameda 21149	New Commitment	Upgrade express bus services in Dumbarton corridor	☐	☑	☐	☐	☐	☑
Alameda 21151	New Commitment	LAVTA maintenance/operations facility	☐	☑	☐	☐	☐	☐
Alameda 21157	New Commitment	I-80/Ashby Avenue/Shellmound Street interchange modifications	☐	☑	☐	☐	☐	☑
Alameda 21159	New Commitment	AC Transit facilities expansion in northern Alameda County	☐	☑	☐	☐	☐	☑
Alameda 21185	New Commitment	Extend Eden Road from Doolittle Drive to city of San Leandro water pollution control plant	☐	☑	☐	☐	☐	☐
Alameda 21417	Committed	Dumbarton Express park-and-ride: 90 spaces on Decoto Road near I-880 by the Dumbarton Bridge (includes right-of-way acquisition)	☐	☑	☐	☐	☐	☑
Alameda 21451	Committed	East 14th Street/Hesperian Boulevard/150th Street channelization improvements	☐	☑	☐	☐	☐	☐
Alameda 21455	Committed	Widen I-238 between I-580 and I-880 from 4 lanes to 6 lanes, includes auxiliary lanes on I-880 south of I-238	☐	☑	☐	☐	☐	☑
Alameda 21456	Committed	I-580 auxiliary lanes between Santa Rita Road/Tassajara Road and Airway Boulevard interchanges	☐	☑	☐	☐	☐	☑
Alameda 21460	Committed	Iron Horse bicycle, pedestrian and transit route	☐	☑	☐	☐	☐	☐
Alameda 21466	Committed	Washington Avenue/Beatrice Street interchange improvements	☐	☑	☐	☐	☐	☐
Alameda 21467	Committed	Extend Westgate Parkway along eastern edge of Westgate Shopping Center between Williams Street and Davis Street	☐	☑	☐	☐	☐	☐
Alameda 21470	Committed	I-680/Sunol Boulevard ramp improvements (includes signal improvements and widening under existing structure)	☐	☑	☐	☐	☐	☑
Alameda 21472	Committed	I-680/Bernal Avenue interchange improvements	☐	☑	☐	☐	☐	☑

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Alameda 21473	Committed	Construct a 4-lane major arterial connecting Dublin Boulevard and North Canyons Parkway	☐	☑	☐	☐	☐	☐
Alameda 21480	Committed	Route 84/Ardenwood Boulevard westbound offramp intersection improvements	☐	☑	☐	☐	☐	☑
Alameda 21482	Committed	Exend Fremont Boulevard to connect to I-880/Dixon Landing Road	☐	☑	☐	☐	☐	☐
Alameda 21486	Committed	Paseo Padre Parkway/Peralta Boulevard (Route 84) intersection improvements	☐	☑	☐	☐	☐	☐
Alameda 21487	Committed	Widen Mowry Avenue from Mission Boulevard to Peralta Boulevard	☐	☑	☐	☐	☐	☐
Alameda 21489	Committed	I-580/San Ramon Road/Foothill Road interchange improvements	☐	☑	☐	☐	☐	☑
Alameda 21492	Committed	Extend Scarlett Drive from Dublin Boulevard to Dougherty Road	☐	☑	☐	☐	☐	☐
Alameda 21886	Committed	Widen unimproved segment of Industrial Parkway between Whipple Road and improved segment of Industrial Parkway from 2 lanes to 4 lanes	☐	☑	☐	☐	☐	☐
Alameda 21896	Committed	Route 84 vertical and horizontal alignment improvements in Fremont (from 3 miles east of I-680 to 5.1 miles east of I-680)	☐	☑	☐	☐	☐	☐
Alameda 22002	New Commitment	Extend HOV lane on I-880 northbound from existing HOV terminus at Bay Bridge approach to Maritime on-ramp	☐	☑	☐	☐	☑	☑
Alameda 22007	Committed	Bicycle and pedestrian projects	☐	☑	☐	☐	☐	☐
Alameda 22013	New Commitment	I-580 corridor improvements (includes widen I-580 in both directions for HOV and auxiliary lanes from Tassajara Road to Greenville Road, construct HOV direct connector from westbound I-580 to southbound I-680, construct eastbound truck climbing lane from Flynn Road to Greenville Road (Altamont Summit), and acquire express buses)	☐	☑	☐	☐	☑	☑
Alameda 22021	New Commitment	AC Transit transfer station and park-and-ride facility in Central Alameda County	☐	☑	☐	☐	☐	☐
Alameda 22042	New Commitment	Widen I-680 for northbound HOV lane from Route 237 to Stoneride Drive (includes ramp metering and auxiliary lanes)	☐	☑	☐	☐	☐	☑

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Alameda 22056	New Commitment	Ed Roberts Campus at Ashby BART Station	☐	☑	☐	☐	☐	☐
Alameda 22059	New Commitment	Improve downtown streets and pedestrian plaza surrounding Berkeley BART Station	☐	☑	☐	☐	☐	☐
Alameda 22062	New Commitment	Construct infrastructure for future Irvington BART Station	☐	☑	☐	☐	☐	☐
Alameda 22063	New Commitment	Route 238 corridor improvements between Foothill Boulevard/Mattox Road to Mission Boulevard/Industrial Parkway (includes adding a lane throughout the corridor and grade separations at the Foothill/Mission/Jackson interchange)	☐	☑	☐	☐	☐	☑
Alameda 22064	New Commitment	Convert southbound High Occupancy Vehicle (HOV) lane on I-680 between Route 84 and Route 237 into High Occupancy Toll (HOT) lane	☐	☑	☐	☐	☐	☑
Alameda 22080	New Commitment	Oakland Citywide Intelligent Transportation Systems (ITS) (Phase 1)	☐	☑	☐	☐	☐	☐
Alameda 22082	New Commitment	Reconstruct 7th Street/Union Pacific Railroad grade separation	☐	☑	☐	☐	☐	☐
Alameda 22092	New Commitment	Alameda County Transportation Operating System (TOS) and ramp metering from Dublin to I-880, including I-238	☐	☑	☐	☐	☐	☑
Alameda 22100	New Commitment	Replace I-880/Davis Street overcrossing	☐	☑	☐	☐	☐	☐
Alameda 22101	New Commitment	Replace I-880/Marina Boulevard overcrossing	☐	☑	☐	☐	☐	☐
Alameda 22110	New Commitment	University Avenue traffic management and streetscape enhancements to support enhanced bus service	☐	☑	☐	☐	☐	☐
Alameda 22455	New Commitment	AC Transit Bus Rapid Transit (BRT) and Enhanced Bus, Phase 1: Telegraph Avenue/International Boulevard corridor	☐	☑	☐	☐	☑	☐
Alameda 22469	Committed	East Dublin/Pleasanton BART Station transit village	☐	☑	☐	☐	☐	☐
Alameda 22509	New Commitment	Alameda/Oakland to San Francisco ferry service and Harbor Bay to San Francisco ferry service	☐	☑	☐	☐	☑	☐

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Alameda 22511	New Commitment	Berkeley/Albany to San Francisco ferry service	☐	☑	☐	☐	☑	☐
Alameda 22657	New Commitment	I-205/I-580 Altamont Pass westbound truck lane	☐	☑	☐	☐	☐	☑
Alameda 22760	New Commitment	Outer Harbor intermodal terminal (formerly known as Joint Intermodal Terminal (JIT) expansion)	☐	☑	☐	☐	☐	☑
Alameda 22761	New Commitment	I-880 from Hegenberger Road to I-980 operation improvements (includes freight movement to Port of Oakland)	☐	☑	☐	☐	☐	☑
Alameda 22763	New Commitment	Reconstruct southbound I-880 on- and off- ramps in conjunction with I-880/5th Street seismic retrofit	☐	☑	☐	☐	☐	☐
Alameda 22764	New Commitment	Construct auxiliary lane on I-880 between Hegenberger Road and 66th Avenue and shift merge point of the westbound Hegenberger Road to I-880 on-ramp	☐	☑	☐	☐	☐	☐
Alameda 22766	New Commitment	Fruitvale Avenue Rail Bridge seismic retrofit	☐	☑	☐	☐	☐	☐
Alameda 22768	New Commitment	Estuary Bridges seismic retrofit and repairs	☐	☑	☐	☐	☐	☐
Alameda 22769	New Commitment	I-880/29th Avenue interchange safety and access improvements	☐	☑	☐	☐	☐	☐
Alameda 22773	New Commitment	Transit capital replacement, local road rehabilitation and safety projects	☐	☑	☐	☐	☐	☐
Alameda 22774	New Commitment	Bicycle and pedestrian improvements in Cherryland/Ashland and South Hayward areas as recommended in community-based transportation plan	☐	☑	☐	☐	☐	☐
Alameda 22775	New Commitment	Broadway Avenue and Telegraph Avenue bus, BART, bicycle and taxi integration improvements	☐	☑	☐	☐	☐	☐
Alameda 22776	New Commitment	Widen Route 84 from 2 lanes to 4 lanes from north of Pigeon Pass to Vineyard Avenue and 2 lanes to 4 or 6 lanes from Vineyard Avenue to Jack London Boulevard	☐	☑	☐	☐	☐	☑
Alameda 22777	New Commitment	I-580 on- and off-ramp improvements in Castro Valley	☐	☑	☐	☐	☐	☐

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Alameda 22778	New Commitment	Lewelling Boulevard/East Lewelling Boulevard road modifications from Hesperian Boulevard to East 14th Street to improve channelization and accommodate pedestrian and bicycle facilities	☐	☑	☐	☐	☐	☐
Alameda 22779	New Commitment	Route 262/Warren Avenue/I-880 interchange improvements (including Union Pacific Railroad grade separation) (Phase 2)	☐	☑	☐	☐	☐	☑
Alameda 22781	New Commitment	Traffic signals in Albany	☐	☑	☐	☐	☐	☐
Alameda 22782	New Commitment	Transit oriented development (including replacement parking) at MacArthur, West Oakland, and/or Coliseum BART Stations	☐	☑	☐	☐	☐	☐
Alameda 22783	New Commitment	Fruitvale Avenue Bridge seismic retrofit	☐	☑	☐	☐	☐	☐
Alameda 22785	Committed	Construct I-580 eastbound auxiliary lane from First Street to Vasco Road	☐	☑	☐	☐	☐	☐
Alameda 22796	Committed	Construct 4-lane arterial connection between future eastern end of Dublin Boulevard in Dublin to North Canyons Parkway in Livermore	☐	☑	☐	☐	☐	☐
Alameda 22990	New Commitment	Widen Route 262 from I-880 to Warm Springs Boulevard (including reconstructing Route 262/I-880 and Route 262/Kato Road interchanges) and reconstruct Union Pacific Railroad underpasses	☐	☑	☐	☐	☐	☑
Alameda 22991	Committed	Widen I-680 for southbound High Occupancy Vehicle/High Occupancy Toll (HOV/HOT) lane from Route 237 to Route 84 (includes ramp metering and auxiliary lanes)	☐	☑	☐	☐	☑	☑
Alameda 94012	New Commitment	Union City Intermodal Station (Phase 1)	☐	☑	☐	☐	☐	☑
Alameda 94024	Committed	Auto/truck separation lane at I-580/I-205 interchange	☐	☑	☐	☐	☐	☑
Alameda 94030	Committed	Reconstruct I-880/Route 262 interchange and widen I-880 from Route 262 (Mission Boulevard) to the Santa Clara County line from 8 lanes to 10 lanes (8 mixed-flow and 2 HOV lanes)	☐	☑	☐	☐	☐	☑
Alameda 94506	Committed	Widen Route 84 to 6-lane parkway from I-880 to Paseo Padre and 4-lane parkway from Paseo Padre to Mission Boulevard along the Historic Parkway alignment	☐	☑	☐	☐	☐	☑

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Alameda 98153	Committed	Reconstruct MacArthur Boulevard onramp to restore access to I-80 eastbound and I-580 westbound	☐	☑	☐	☐	☐	☐
Alameda 98207	New Commitment	I-880/Broadway-Jackson interchange improvements (Phase 1)	☐	☑	☐	☐	☐	☑
Alameda 98208	New Commitment	Soundwalls program	☐	☑	☐	☐	☐	☐
Alameda 21100	Committed	I-580/Vasco Road interchange improvements	☐	☐	☑	☐	☐	☑
Alameda 21475	Committed	I-580/First Street interchange improvements	☐	☐	☑	☐	☐	☑
Alameda 21477	Committed	I-580/Greenville Road interchange improvements	☐	☐	☑	☐	☐	☑
Alameda 22780	New Commitment	AC Transit Bus Rapid Transit improvements along major corridors (includes MacArthur Boulevard/West Grand Avenue, College Avenue/University Avenue, Shattuck Avenue/Alameda Boulevard, Foothill Boulevard, Sacramento Street/Market Street, Mission Boulevard/Outer East 14th Street, Hesperian Boulevard)	☐	☐	☑	☐	☑	☑
Alameda 21464	Committed	Paratransit for AC Transit, BART, non-mandated city programs, service gap coordination	☐	☐	☐	☑	☐	☐
Alameda 21465	Committed	Transit enhancements funded by transit center development funds	☐	☐	☐	☑	☐	☐
Alameda 21468	Committed	Transit operations - AC Transit, Welfare to Work, Alameda ferries, Altamont Commuter Express (ACE), Union City Transit, Livermore Amador Valley Transit Authority (LAVTA), and countywide express bus	☐	☐	☐	☑	☐	☐
Alameda 21863	Committed	Local bridge maintenance	☐	☐	☐	☑	☐	☐
Alameda 21992	Committed	AC Transit bus corridor improvements	☐	☐	☐	☑	☐	☑
Alameda 94001	New Commitment	Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation shortfall	☐	☐	☐	☑	☐	☐
Alameda 94522	Committed	Local streets and roads pavement and non-pavement maintenance	☐	☐	☐	☑	☐	☐

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Alameda 94525	New Commitment	BART (Alameda County share based on population) - transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements, equipment, fixed facilities and other capital assets; does not include expansion except BART-to-SFO extension)	☐	☐	☐	☑	☐	☐
Alameda 94526	New Commitment	AC Transit (Alameda County share based on population) - transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include system expansion)	☐	☐	☐	☑	☐	☐
Alameda 94527	Committed	Livermore Amador Valley Transit Authority (LAVTA) transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include system expansion)	☐	☐	☐	☑	☐	☐
Alameda 98139	New Commitment	ACE station/track improvements in Alameda County (including parking improvements at Vasco Road and downtown Livermore stations)	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
Bay Area Region/Multi-County 94540	Committed	Carquinez Bridge replacement: construct new suspension bridge west of existing bridges (4 westbound lanes, including an HOV lane, plus new bicycle/pedestrian pathway) and modify Crockett interchange	☑	☐	☐	☐	☐	☑
Bay Area Region/Multi-County 98102	Committed	South Access to the Golden Gate Bridge: Doyle Drive environmental study	☑	☐	☐	☐	☐	☐
Bay Area Region/Multi-County 21012	Committed	Golden Gate Bridge seismic retrofit (completes Phases 2 and 3)	☐	☑	☐	☐	☐	☐
Bay Area Region/Multi-County 21014	Committed	Richmond-San Rafael Bridge deck replacement	☐	☑	☐	☐	☐	☐
Bay Area Region/Multi-County 21320	Committed	Golden Gate Bridge moveable median barrier	☐	☑	☐	☐	☐	☐
Bay Area Region/Multi-County 21342	New Commitment	Caltrain downtown extension/Transbay Terminal replacement (preliminary engineering/right-of-way acquisition)	☐	☑	☐	☐	☐	☑
Bay Area Region/Multi-County 21619	New Commitment	Caltrain express tracks (Phase 2)	☐	☑	☐	☐	☐	☑

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Bay Area Region/Multi-County								
21627	New Commitment	Caltrain electrification from San Francisco to Gilroy	☐	☑	☐	☐	☐	☑
Bay Area Region/Multi-County								
21778	Committed	San Francisco-Oakland Bay Bridge: seismic retrofit of the west span and west approach	☐	☑	☐	☐	☐	☑
Bay Area Region/Multi-County								
22001	Committed	SMART Commuter Rail project (environmental, preliminary engineering, and right-of-way)	☐	☑	☐	☐	☑	☑
Bay Area Region/Multi-County								
22003	Committed	Capitol Corridor: Phase 2 enhancements	☐	☑	☐	☐	☐	☑
Bay Area Region/Multi-County								
22006	Committed	Downtown Ferry Terminal improvements and spare ferry vessels	☐	☑	☐	☐	☑	☐
Bay Area Region/Multi-County								
22009	Committed	Capitol Corridor intercity rail service (track capacity/frequency improvements from Oakland to San Jose designed to allow 16 daily round trips between Oakland and Sacramento/San Jose)	☐	☑	☐	☐	☐	☑
Bay Area Region/Multi-County								
22240	Committed	Regional Measure 2 Express Bus South Improvements (includes park-and-ride lots, HOV access improvements, and rolling stock)	☐	☑	☐	☐	☑	☐
Bay Area Region/Multi-County								
22241	Committed	Regional Measure 2 Studies (includes regional rail study, transit connectivity study, Water Transit Authority (WTA) environmental studies, I-680/Pleasant Hill BART connector study, and Caldecott Tunnel transit ridership study)	☐	☑	☐	☐	☐	☐
Bay Area Region/Multi-County								
22242	Committed	Real-Time Transit Grant Program	☐	☑	☐	☐	☐	☐
Bay Area Region/Multi-County								
22243	Committed	Regional Measure 2 Express Bus North Improvements (includes park and ride lots and rolling stock)	☐	☑	☐	☐	☐	☐
Bay Area Region/Multi-County								
22244	Committed	City Carshare	☐	☑	☐	☐	☐	☐
Bay Area Region/Multi-County								
22520	Committed	BART earthquake safety program (excludes Phase 1 of transbay tube earthquake safety project)	☐	☑	☐	☐	☐	☐
Bay Area Region/Multi-County								
22636	Committed	BART transbay tube earthquake safety (Phase 1)	☐	☑	☐	☐	☐	☐
Bay Area Region/Multi-County								
94089	New Commitment	Reconstruct South Access to the Golden Gate Bridge: Doyle Drive to Broderick Street (includes Route 1/US 101 interchange improvements)	☐	☑	☐	☐	☐	☑
Bay Area Region/Multi-County								
94514	Committed	I-880/Route 92 interchange improvements	☐	☑	☐	☐	☐	☑

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Bay Area Region/Multi-County								
94541	Committed	New Benicia-Martinez Bridge: construct new bridge span east of existing span (4 mixed-flow lanes and 1 slow-vehicle lane). Includes new toll plaza and upgrades to I-680/I-780 interchange and I-680/Marina Vista Road interchange, and reconstruction of the existing bridge for 4 mixed-flow lanes and bicycle and pedestrian lane	☐	☑	☐	☐	☐	☑
Bay Area Region/Multi-County								
22675	New Commitment	BART Core Capacity Program - station access	☐	☐	☑	☐	☐	☐
Bay Area Region/Multi-County								
21001	New Commitment	Freeway Traffic Operations Systems	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21002	New Commitment	Freeway Service Patrol (FSP)/freeway call boxes	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21003	New Commitment	Technical Assistance Programs/arterial signal retiming	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21005	New Commitment	TransLink®	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21006	New Commitment	511/Transit (regional transit information systems) and transportation marketing	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21007	New Commitment	Rideshare Program	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21008	New Commitment	511/Traffic	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21010	New Commitment	Performance monitoring	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21011	New Commitment	Transportation for Livable Communities (TLC)/Housing Incentive Program (HIP) - regional and county programs	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21013	Committed	Rehabilitation of Bay Area state-owned toll bridges	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21015	Committed	Seismic retrofit of Bay Area state-owned toll bridges, excluding San Francisco-Oakland Bay Bridge (see #21778 and #21879 below)	☐	☐	☐	☑	☐	☐

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Bay Area Region/Multi-County								
21017	Committed	Small transit operators in Alameda, Contra Costa, Napa, Solano and Sonoma Counties - transit operating and capital improvement program (including replacement, rehabilitation, and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include system expansion)	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
21879	Committed	San Francisco-Oakland Bay Bridge: east span seismic safety project	☐	☐	☐	☑	☐	☑
Bay Area Region/Multi-County								
22245	Committed	Safe Routes to Transit	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
22247	New Commitment	Regional Bicycle and Pedestrian Program	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
22421	New Commitment	Clean Air Program	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
22423	New Commitment	Lifeline Transportation Program	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
22425	New Commitment	Surface Transportation Program (STP) and 10-year support for Transportation Planning and Land Use Solutions (T-PLUS) planning funds for counties	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
22674	New Commitment	BART Core Capacity Program - system capacity	☐	☐	☐	☑	☐	☐
Bay Area Region/Multi-County								
22676	New Commitment	BART Core Capacity Program - station capacity	☐	☐	☐	☑	☐	☐
Contra Costa								
Contra Costa								
21203	New Commitment	Express bus capital costs for commuter bus service from Contra Costa Express Bus Study	☑	☐	☐	☐	☐	☐
Contra Costa								
21214	Committed	Widen Wilbur Avenue over Burlington Northern Santa Fe Railroad from 2 lanes to 4 lanes	☑	☐	☐	☐	☐	☐
Contra Costa								
22600	Committed	Widen Somersville Road Bridge in Antioch to 4 lanes	☑	☐	☐	☐	☐	☐
Contra Costa								
94052	Committed	I-680 HOV lanes from Marina Vista interchange to North Main Street (southbound) and from Route 242 northbound to the Marina Vista interchange	☑	☐	☐	☐	☐	☑
Contra Costa								
94054	Committed	Martinez Intermodal Terminal Facility (Phases 1 and 2); includes construction of a new passenger rail station, bus facilities and parking	☑	☐	☐	☐	☐	☑

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Contra Costa 94531	Committed	Widen Route 4 to 6 mixed flow lanes and 2 HOV lanes from Bailey Road to Railroad Avenue with median wide enough to accommodate future BART and restripe from Route 242 to Bailey Avenue for HOV lanes	☑	☐	☐	☐	☐	☑
Contra Costa 94538	Committed	Route 4 transportation management system	☑	☐	☐	☐	☐	☐
Contra Costa 98104	Committed	Widen Route 4 from Railroad Avenue to Loveridge: interchange improvements and highway widening to 6 mixed flow lanes and 2 HOV lanes	☑	☐	☐	☐	☐	☑
Contra Costa 98127	Committed	I-680/Alcosta Boulevard interchange improvements	☑	☐	☐	☐	☐	☐
Contra Costa 98197	Committed	Richmond intermodal transfer station (station building)	☑	☐	☐	☐	☐	☐
Contra Costa 98198	New Commitment	Vasco Road safety and operational improvements in Contra Costa and Alameda counties	☑	☐	☐	☐	☐	☐
Contra Costa 21205	New Commitment	I-680/Route 4 interchange freeway-to-freeway direct connectors: eastbound Route 4 to southbound I-680, and northbound I- 680 to westbound Route 4 (Phases 1 and 2)	☐	☑	☐	☐	☑	☑
Contra Costa 21206	New Commitment	Caldecott Tunnel fourth bore	☐	☑	☐	☐	☑	☑
Contra Costa 21207	Committed	Martinez Intermodal Terminal Facility (Phase 3 initial segment): 200 interim parking spaces (includes site acquisition, demolition and construction)	☐	☑	☐	☐	☑	☑
Contra Costa 21208	Committed	Richmond Parkway Transit Center (includes signal reconfiguration/timing, new 700-800 space parking facility and security improvements at Hilltop park-and-ride lot)	☐	☑	☐	☐	☐	☑
Contra Costa 21209	New Commitment	Hercules Transit Center relocation and expansion	☐	☑	☐	☐	☐	☑
Contra Costa 21210	New Commitment	Capitol Corridor train station in Hercules	☐	☑	☐	☐	☑	☑
Contra Costa 21211	New Commitment	BART/East Contra Costa rail extension	☐	☑	☐	☐	☑	☑

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Contra Costa 21212	Committed	Construct auxiliary lane along eastbound Route 4 and widen Hillcrest Avenue eastbound off-ramp from 1 lane to 2 lanes	☐	☑	☐	☐	☐	☑
Contra Costa 21213	Committed	Pittsburg/Bay Point BART Station parking & lighting improvements (400 new spaces)	☐	☑	☐	☐	☐	☑
Contra Costa 21216	Committed	Extend Laurel Road from Route 4 Bypass to Empire Avenue	☐	☑	☐	☐	☐	☐
Contra Costa 22351	Committed	I-680 northbound HOV gap closure between North Main Street and Route 242	☐	☑	☐	☐	☑	☑
Contra Costa 22353	Committed	I-680 southbound HOV gap closure between North Main Street and Livorna	☐	☑	☐	☐	☑	☑
Contra Costa 22354	Committed	I-680/Marina Vista interchange improvements	☐	☑	☐	☐	☑	☑
Contra Costa 22360	Committed	I-80/San Pablo Dam Road interchange reconstruction	☐	☑	☐	☐	☑	☑
Contra Costa 22389	Committed	Construct Route 242/Clayton Road southbound off-ramp	☐	☑	☐	☐	☐	☐
Contra Costa 22601	Committed	Route 4 Bypass, Segment 3: construct a 2-lane facility from Balfour Road to Walnut Boulevard, and upgrade Marsh Creek Road	☐	☑	☐	☐	☐	☑
Contra Costa 22602	New Commitment	Construct I-680 auxiliary lanes in both directions from Sycamore Valley Road to Crow Canyon Road	☐	☑	☐	☐	☐	☑
Contra Costa 22603	New Commitment	Richmond intermodal transfer station (680 space parking garage)	☐	☑	☐	☐	☐	☑
Contra Costa 22637	Committed	BART crossover at the Pleasant Hill BART Station	☐	☑	☐	☐	☑	☐
Contra Costa 94045	New Commitment	New express buses for I-80 HOV service (capital costs)	☐	☑	☐	☐	☐	☑
Contra Costa 94047	Committed	Extend the northern limits of the I-80 westbound HOV lane from north of Cummings Skyway to Route 4	☐	☑	☐	☐	☐	☐
Contra Costa 94051	Committed	I-680 auxiliary lane from Diablo Road to Sycamore Valley Road (Segment 1) in Danville and from Crow Canyon Road to Bollinger Canyon Road (Segment 3) in San Ramon	☐	☑	☐	☐	☐	☐

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Contra Costa 94532	Committed	Gateway Lamorinda Traffic Program	☐	☑	☐	☐	☐	☐
Contra Costa 96022	Committed	Route 4 Bypass, Segment 1: construct a 6-lane facility from Route 4 to Laurel Road and a 4-lane facility from Laurel Road interchange to Lone Tree Way, and add interchanges at Laurel Road and Lone Tree Way	☐	☑	☐	☐	☐	☑
Contra Costa 98115	Committed	Widen Ygnacio Valley/Kirker Pass Roads from 4 lanes to 6 lanes from Michigan Boulevard to Cowell Road	☐	☑	☐	☐	☐	☐
Contra Costa 98130	New Commitment	Widen Alhambra Avenue from Route 4 to McAlvey Drive from 2 lanes to 4 lanes	☐	☑	☐	☐	☐	☐
Contra Costa 98132	Committed	Widen and extend Bollinger Canyon Road to 6 lanes from Alcosta Boulevard to Dougherty Road	☐	☑	☐	☐	☐	☐
Contra Costa 98133	New Commitment	Widen Pacheco Boulevard from Blum Road to Arthur Road from 2 lanes to 4 lanes	☐	☑	☐	☐	☐	☐
Contra Costa 98134	Committed	Widen Dougherty Road to 6 lanes from Red Willow to Contra Costa County line	☐	☑	☐	☐	☐	☐
Contra Costa 98135	Committed	Construct Windermere Parkway: 4 lanes from Bollinger Canyon Road extension to East Branch	☐	☑	☐	☐	☐	☐
Contra Costa 98136	Committed	Construct East Branch as 4 lanes from Bollinger Canyon Road extension to Camino Tassajara	☐	☑	☐	☐	☐	☐
Contra Costa 98142	Committed	Widen Route 4 from 4 lanes to 8 lanes with HOV lanes from Loveridge Road to Somersville Road	☐	☑	☐	☐	☐	☑
Contra Costa 98157	New Commitment	Enhancements to AC Transit bus service for the San Pablo corridor in Contra Costa County	☐	☑	☐	☐	☐	☐
Contra Costa 98193	Committed	Extend Panoramic Drive from North Concord BART Station to Willow Pass Road	☐	☑	☐	☐	☐	☐
Contra Costa 98194	New Commitment	Extend Commerce Avenue between Pine Creek and Waterworld Parkway to connect Willow Pass Road with Route 242/Concord Avenue interchange	☐	☑	☐	☐	☐	☐
Contra Costa 98196	New Commitment	Route 24 eastbound auxiliary lanes from Gateway Boulevard to Brookwood Road/Moraga Way	☐	☑	☐	☐	☐	☐
Contra Costa 98211	Committed	I-80 eastbound HOV lane extension from Route 4 to the Crockett interchange just south of the Carquinez Bridge	☐	☑	☐	☐	☑	☑

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Contra Costa 98999	New Commitment	Widen Route 4 eastbound from 4 lanes to 8 lanes from Somersville Road to Route 160	☐	☑	☐	☐	☑	☑
Contra Costa 21204	New Commitment	Ancillary park-and-ride, transit access, express bus service enhancements	☐	☐	☑	☐	☐	☐
Contra Costa 21218	Committed	Additional bus transit operations support	☐	☐	☑	☐	☐	☐
Contra Costa 22342	Committed	Express bus service expansion along I-680 corridor, Phase 1	☐	☐	☑	☐	☐	☑
Contra Costa 22350	New Commitment	I-680/Route 4 interchange improvements (Phases 3 through 5) and HOV flyover ramps	☐	☐	☑	☐	☐	☑
Contra Costa 22382	Committed	Richmond Parkway/San Pablo Avenue grade separated interchange	☐	☐	☑	☐	☐	☑
Contra Costa 22388	Committed	Construct Route 242/Clayton Road northbound on-ramp	☐	☐	☑	☐	☑	☐
Contra Costa 22402	Committed	School bus programs in San Ramon and Lamorinda	☐	☐	☑	☐	☐	☐
Contra Costa 22609	Committed	Major streets widening, extensions and interchange improvements (Central County), Phase 1	☐	☐	☑	☐	☐	☐
Contra Costa 22613	Committed	Major streets widening, extensions and interchange improvements (Southwest County), Phase 1	☐	☐	☑	☐	☐	☐
Contra Costa 22614	New Commitment	Martinez Intermodal Station (Phase 3): construction of an additional 425 spaces and auto/pedestrian bridges	☐	☐	☑	☐	☐	☑
Contra Costa 94046	New Commitment	Non-capacity-increasing improvements to interchanges and parallel arterials to Route 4	☐	☐	☑	☐	☐	☐
Contra Costa 94048	New Commitment	Non-capacity-increasing improvements to interchanges and parallel arterials to I-80	☐	☐	☑	☐	☐	☐
Contra Costa 94050	New Commitment	Upgrade Route 4 to full freeway from I-80 to Cummings Skyway (Phase 2)	☐	☐	☑	☐	☐	☑
Contra Costa 98126	New Commitment	Non-capacity-increasing improvements to interchanges and parallel arterials to I-680 and Route 24	☐	☐	☑	☐	☐	☐
Contra Costa 98221	Committed	Route 4 Bypass, Segment 2, Phase2: widen to 4 lanes from Lone Tree Way to Balfour Road	☐	☐	☑	☐	☑	☑

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Contra Costa 98222	New Commitment	Route 4 Bypass, Segment 1: Route 160 freeway-to-freeway connectors to and from the north	☐	☐	☑	☐	☑	☑
Contra Costa 21202	New Commitment	Regional and local pedestrian and bicycle improvements, including overcrossing locations to be determined	☐	☐	☐	☑	☐	☐
Contra Costa 21864	Committed	Local bridge maintenance	☐	☐	☐	☑	☐	☐
Contra Costa 22122	Committed	Ferry service in western Contra Costa County (Richmond and Hercules or Rodeo)	☐	☐	☐	☑	☑	☐
Contra Costa 22607	Committed	Major streets widening, extensions and interchange improvements (East County), Phase 1	☐	☐	☐	☑	☐	☐
Contra Costa 22611	Committed	Low-income student bus pass program	☐	☐	☐	☑	☐	☐
Contra Costa 94036	New Commitment	Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation shortfall	☐	☐	☐	☑	☐	☐
Contra Costa 94553	Committed	Local streets and roads pavement and non-pavement maintenance	☐	☐	☐	☑	☐	☐
Contra Costa 94556	New Commitment	BART (Contra Costa County share) - transit operating and capital improvement program (including replacement, rehabilitation, and minor enhancements, equipment, fixed facilities and other capital assets; does not include expansion except BART-to-SFO extension)	☐	☐	☐	☑	☐	☐
Contra Costa 94557	New Commitment	AC Transit (Contra Costa County) - transit operating and capital improvement program (including replacement, rehabilitation, and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include system expansion)	☐	☐	☐	☑	☐	☐
Contra Costa 94558	Committed	Central Contra Costa Transit Authority (CCCTA) - transit operating and capital improvement program (including replacement, rehabilitation, and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include system expansion)	☐	☐	☐	☑	☐	☐
Marin								
Marin 21306	New Commitment	US 101/Lucas Valley Road interchange improvements (initial phase)	☑	☐	☐	☐	☐	☑

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Marin 21888	Committed	Construct flyover from Sanitary Landfill Road east of US 101 to southbound US 101	☑	☐	☐	☐	☐	☐
Marin 98178	Committed	US 101/Sir Francis Drake Boulevard improvements	☑	☐	☐	☐	☑	☐
Marin 98179	New Commitment	US 101/Tiburon Boulevard interchange improvements	☑	☐	☐	☐	☐	☑
Marin 21308	New Commitment	Expand Manzanita park-and-ride lot	☐	☑	☐	☐	☐	☐
Marin 21325	Committed	US 101/Greenbrae interchange improvements	☐	☑	☐	☐	☑	☑
Marin 22146	Committed	Construct Class 1 bicycle path between Larkspur and Central San Rafael; includes rehabilitation of Cal Park Hill Tunnel	☐	☑	☐	☐	☐	☐
Marin 22157	New Commitment	Park-and-ride lots	☐	☑	☐	☐	☐	☐
Marin 22159	New Commitment	Marin County US 101 northbound ramp meter, TOS, fiber optic cable project	☐	☑	☐	☐	☐	☑
Marin 22160	New Commitment	Marin County US 101 southbound and I-580 ramp meter, TOS, fiber optic cable project	☐	☑	☐	☐	☐	☑
Marin 22419	Committed	Widen US 101 for HOV lanes in both directions from Lucky Drive to North San Pedro Road	☐	☑	☐	☐	☐	☑
Marin 94563	Committed	Widen US 101 for HOV lanes (one in each direction) from Lucky Drive in Corte Madera to North San Pedro Road in San Rafael	☐	☑	☐	☐	☐	☑
Marin 98154	New Commitment	Widen US 101 from Route 37 to the Sonoma County line from 4 lanes to 6 lanes (including 2 HOV lanes) and convert some highway sections to freeway standards	☐	☑	☐	☐	☐	☑
Marin 21302	New Commitment	Bicycle and pedestrian projects	☐	☐	☑	☐	☐	☐
Marin 21303	New Commitment	Local Marin bus service enhancements (capital only)	☐	☐	☑	☐	☐	☐
Marin 98525	New Commitment	Seismic retrofit and upgrade (rehabilitation) of local bridges and overpasses shortfall	☐	☐	☑	☐	☐	☐

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Marin 21865	Committed	Local bridge maintenance	☐	☐	☐	☑	☐	☐
Marin 94055	New Commitment	Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation shortfall	☐	☐	☐	☑	☐	☐
Marin 94572	Committed	Golden Gate Transit (Marin County share) - Transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include expansion)	☐	☐	☐	☑	☐	☐
Marin 98511	Committed	Local streets and roads pavement and non-pavement maintenance	☐	☐	☐	☑	☐	☐
Napa								
Napa 94070	Committed	Transit service center on Soscol Avenue at Jackson Street and operational improvements to existing transit programs	☑	☐	☐	☐	☐	☐
Napa 94575	Committed	Construct grade-separated interchange at Route 29 and Redwood Road/Trancas Street	☑	☐	☐	☐	☐	☐
Napa 94071	Committed	Replace Napa River (Maxwell) Bridge and widen from 2 lanes to 4 lanes on Route 121 over the Napa River in the city of Napa	☐	☑	☐	☐	☐	☑
Napa 94073	New Commitment	Construct new southbound Route 221 to southbound Route 29 flyover (including auxiliary lane to Route 12/Route 29)	☐	☑	☐	☐	☐	☑
Napa 94074	New Commitment	Widen Route 12 (Jamieson Canyon) from I-80 in Solano County to Route 29 in Napa County from 2 lanes to 4 lanes (Napa County portion of project)	☐	☑	☐	☐	☐	☑
Napa 94075	New Commitment	Route 12/Route 29/Airport interchange construction	☐	☑	☐	☐	☐	☑
Napa 94076	Committed	Trancas intermodal facility adjacent to interchange at Route 29 and Redwood Road/Trancas Street	☐	☑	☐	☐	☐	☑
Napa 21871	Committed	Local bridge maintenance	☐	☐	☐	☑	☐	☐
Napa 94064	New Commitment	Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation shortfall	☐	☐	☐	☑	☐	☐

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Napa								
94576	Committed	Local streets and roads pavement and non-pavement maintenance	☐	☐	☐	☑	☐	☐
San Francisco								
San Francisco								
21506	New Commitment	Advanced Technology and Information Systems (SFgo)	☑	☐	☐	☐	☐	☐
San Francisco								
22255	Committed	Construct Ilinois Street Intermodal Bridge across Islais Creek to connect to Port of San Francisco's Pier 80 cargo terminal	☑	☐	☐	☐	☐	☐
San Francisco								
94632	Committed	Third Street Light Rail project: light rail transit extension to Bayview Hunters Point (Phase 1, initial operating segment)	☑	☐	☐	☐	☐	☑
San Francisco								
98593	Committed	Integrated Transportation Management System (SFgo) Initial Phase	☑	☐	☐	☐	☐	☐
San Francisco								
21510	New Commitment	Third Street light-rail project: light-rail transit extension to Chinatown (Phase 2, Central Subway)	☐	☑	☐	☐	☐	☑
San Francisco								
21549	Committed	Construct access route linking Hunters Point Shipyard Redevelopment Area to US 101 (involves environmental study, design and right-of-way acquisition)	☐	☑	☐	☐	☐	☐
San Francisco								
22415	Committed	Expand historic streetcar service (sales tax project)	☐	☑	☐	☐	☐	☐
San Francisco								
22420	Committed	Bus Rapid Transit (BRT)/Transit Preferential Streets (TPS) (sales tax project)	☐	☑	☐	☐	☐	☐
San Francisco								
22426	New Commitment	Islais Creek maintenance facility	☐	☑	☐	☐	☐	☐
San Francisco								
94625	Committed	Upgrade Bernal Heights streets to accommodate emergency vehicle access	☐	☑	☐	☐	☐	☐
San Francisco								
98630	Committed	BART Advanced Automatic Train Control System (county share)	☐	☑	☐	☐	☐	☐
San Francisco								
21501	New Commitment	Bicycle projects and programs	☐	☐	☑	☐	☐	☐
San Francisco								
21502	New Commitment	Pedestrian projects and programs	☐	☐	☑	☐	☐	☐
San Francisco								
21504	New Commitment	Traffic signals and signs	☐	☐	☑	☐	☐	☐

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San Francisco 21505	New Commitment	Local bridge seismic work	☐	☐	☑	☐	☐	☐
San Francisco 21507	New Commitment	Transit enhancement program; includes transit system connectivity and accessibility, service gap closures, and expanded service	☐	☐	☑	☐	☐	☐
San Francisco 21508	New Commitment	Bus Rapid Transit Program (BRT)/Transit Preferential Streets (TPS) Program	☐	☐	☑	☐	☐	☐
San Francisco 21526	New Commitment	Transit rehabilitation and replacement	☐	☐	☑	☐	☐	☐
San Francisco 22412	Committed	Additional light rail vehicles (LRVs) to expand MUNI rail service	☐	☐	☑	☐	☐	☐
San Francisco 22416	New Commitment	Traffic calming	☐	☐	☑	☐	☐	☐
San Francisco 21503	Committed	Traffic calming program	☐	☐	☐	☑	☐	☐
San Francisco 21529	New Commitment	New and upgraded streets	☐	☐	☐	☑	☐	☐
San Francisco 21533	Committed	Street tree program	☐	☐	☐	☑	☐	☐
San Francisco 21535	New Commitment	Travel Demand Management (TDM)/Transportation Land Use Coordination	☐	☐	☐	☑	☐	☐
San Francisco 21548	New Commitment	Non-Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation	☐	☐	☐	☑	☐	☐
San Francisco 21866	Committed	Local bridge maintenance	☐	☐	☐	☑	☐	☐
San Francisco 22248	Committed	Wheelchair curb ramps	☐	☐	☐	☑	☐	☐
San Francisco 22249	Committed	New and upgraded streets program	☐	☐	☐	☑	☐	☐
San Francisco 22481	Committed	Caltrain (San Francisco County share) transit operating and capital improvement program (including replacement, rehabilitation and system enhancements for rolling stock, equipment, fixed facilities and other capital assets). Station Improvements (e.g., platforms) are included.	☐	☐	☐	☑	☐	☐

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San Francisco								
22482	New Commitment	Golden Gate Transit (San Francisco County share) - Transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include expansion)	☐	☐	☐	☑	☐	☐
San Francisco								
22514	Committed	Integrated Traffic Management System (SFgo)	☐	☐	☐	☑	☐	☐
San Francisco								
22982	Committed	Transit enhancements program	☐	☐	☐	☑	☐	☐
San Francisco								
22984	New Commitment	Wheelchair curb ramps	☐	☐	☐	☑	☐	☐
San Francisco								
94078	New Commitment	Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation shortfall	☐	☐	☐	☑	☐	☐
San Francisco								
94090	Committed	Bicycle and pedestrian program	☐	☐	☐	☑	☐	☐
San Francisco								
94624	Committed	Traffic signals and signs program	☐	☐	☐	☑	☐	☐
San Francisco								
94627	Committed	Local streets and roads pavement and non-pavement maintenance	☐	☐	☐	☑	☐	☐
San Francisco								
94635	New Commitment	BART (San Francisco County share) - transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements, equipment, fixed facilities and other capital assets; does not include expansion except BART-to-SFO extension)	☐	☐	☐	☑	☐	☐
San Francisco								
94636	Committed	San Francisco Municipal Railway (MUNI) - transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include system expansion)	☐	☐	☐	☑	☐	☐
San Francisco								
94637	Committed	Paratransit	☐	☐	☐	☑	☐	☐
San Francisco								
94639	Committed	Travel Demand Management (TDM) Program	☐	☐	☐	☑	☐	☐
San Mateo								
San Mateo								
21349	Committed	US 101/Ralston Avenue interchange improvement	☑	☐	☐	☐	☐	☑

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RTP ID	Investment*	Project / Program	Complete and Operational By: 2006 / 2007	2015	2025	2030	2005 TIP/ 05-05**	Reg'l Signif.
San Mateo 21605	Committed	US 101/Oyster Point Boulevard interchange improvements (Phases 2 and 3)	☑	☐	☐	☐	☐	☑
San Mateo 21617	Committed	Caltrain Express service between San Francisco and San Jose; includes passing tracks and rolling stock (Phase 1)	☑	☐	☐	☐	☐	☑
San Mateo 94643	Committed	Widen Route 92 between Route 1 and Half Moon Bay city limits	☑	☐	☐	☐	☐	☑
San Mateo 21602	New Commitment	US 101/Broadway interchange reconstruction	☐	☑	☐	☐	☑	☑
San Mateo 21603	New Commitment	US 101/Woodside Road interchange improvements	☐	☑	☐	☐	☑	☑
San Mateo 21606	Committed	US 101/ Willow Road interchange reconstruction	☐	☑	☐	☐	☐	☑
San Mateo 21607	Committed	US 101/University Avenue interchange reconstruction	☐	☑	☐	☐	☐	☑
San Mateo 21608	Committed	US 101 northbound and southbound auxiliary lanes from Marsh Road to Santa Clara County line	☐	☑	☐	☐	☐	☑
San Mateo 21612	New Commitment	Improvement of Dumbarton Bridge access to US 101	☐	☑	☐	☐	☐	☑
San Mateo 21613	New Commitment	Route 92 improvements from San Mateo Bridge to I-280, includes uphill passing lane from US 101 to I-280	☐	☑	☐	☐	☐	☑
San Mateo 21615	New Commitment	I-280/Route 1 interchange safety improvements	☐	☑	☐	☐	☐	☐
San Mateo 21618	New Commitment	Dumbarton rail corridor (Phase 1)	☐	☑	☐	☐	☑	☑
San Mateo 21623	Committed	Caltrain local station improvements in San Mateo County	☐	☑	☐	☐	☑	☐
San Mateo 21626	Committed	Caltrain grade separation program (San Mateo County)	☐	☑	☐	☐	☐	☐
San Mateo 22125	New Commitment	Ferry service from South San Francisco to San Francisco	☐	☑	☐	☐	☑	☐
San Mateo 22223	New Commitment	US 101/Peninsula Avenue southbound ramps	☐	☑	☐	☐	☐	☐

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San Mateo 22226	New Commitment	Intermodal transit improvements at Caltrain Bayshore station, includes cross platform transfers with 3rd Street LRT and improved bus connections	☐	☑	☐	☐	☐	☐
San Mateo 22230	New Commitment	I-280 auxiliary lanes from I-380 to Hickey Boulevard	☐	☑	☐	☐	☐	☐
San Mateo 22236	New Commitment	Study of Hillsdale Transit Center relocation	☐	☑	☐	☐	☐	☐
San Mateo 22239	New Commitment	Manor Drive/Route 1 overcrossing widening and improvement project	☐	☑	☐	☐	☐	☐
San Mateo 22261	New Commitment	Route 1/San Pedro Creek Bridge replacement project (Initial Phase)	☐	☑	☐	☐	☐	☐
San Mateo 22262	New Commitment	US 101 and Route 92 ramp metering, Traffic Operations System (TOS) and fiber communications project	☐	☑	☐	☐	☐	☑
San Mateo 22264	New Commitment	I-280 North and I-380 ramp metering, Traffic Operations System (TOS), fiber communications project	☐	☑	☐	☐	☐	☑
San Mateo 22265	New Commitment	I-280 South and Route 92 ramp metering, Traffic Operations System (TOS) and fiber communications project	☐	☑	☐	☐	☐	☑
San Mateo 22274	New Commitment	Intelligent Transportation System (ITS) improvements in San Mateo County	☐	☑	☐	☐	☐	☐
San Mateo 22282	New Commitment	US 101 operational improvements near Route 92	☐	☑	☐	☐	☐	☐
San Mateo 22424	New Commitment	BART Advanced Automatic Train Control (AATC) Phase V - Daly City to Millbrae/SFO	☐	☑	☐	☐	☐	☐
San Mateo 22615	Committed	Dumbarton Rail Corridor and station improvements	☐	☑	☐	☐	☐	☑
San Mateo 22720	New Commitment	Caltrain grade separation program (San Mateo County)	☐	☑	☐	☐	☐	☐
San Mateo 22751	New Commitment	Route 1 operational and safety improvements in Half Moon Bay area	☐	☑	☐	☐	☐	☐
San Mateo 22756	New Commitment	US 101/Candlestick interchange reconstruction (Phase 1)	☐	☑	☐	☐	☐	☐

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San Mateo 22900	New Commitment	Caltrain local station capital improvements	☐	☑	☐	☐	☐	☐
San Mateo 94100	Committed	US 101 auxiliary lanes from Marsh Road to Route 92 (under construction)	☐	☑	☐	☐	☐	☐
San Mateo 94656	Committed	Devil's Slide bypass	☐	☑	☐	☐	☐	☑
San Mateo 98176	Committed	US 101 auxiliary lanes from 3rd Avenue to Millbrae and US 101/Peninsula Avenue interchange reconstruction	☐	☑	☐	☐	☐	☑
San Mateo 98204	Committed	Construct Route 1 northbound and southbound lanes from Fassler Avenue to Westport Drive in Pacifica	☐	☑	☐	☐	☐	☑
San Mateo 21624	New Commitment	Transit-Oriented Development Incentives Program	☐	☐	☑	☐	☐	☐
San Mateo 22268	New Commitment	Countywide shuttle service programs	☐	☐	☑	☐	☐	☐
San Mateo 21630	Committed	Continuation of SamTrans express service	☐	☐	☐	☑	☐	☐
San Mateo 21867	Committed	Local bridge maintenance	☐	☐	☐	☑	☐	☐
San Mateo 21876	New Commitment	BART (San Mateo County share) - transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements, equipment, fixed facilities and other capital assets; does not include expansion except BART to SFO extension)	☐	☐	☐	☑	☐	☐
San Mateo 94093	New Commitment	Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation shortfall	☐	☐	☐	☑	☐	☐
San Mateo 94662	Committed	Local streets and roads pavement and non-pavement maintenance	☐	☐	☐	☑	☐	☐
San Mateo 94664	Committed	Caltrain (San Mateo County share) transit operating and capital improvement program (including replacement, rehabilitation and system enhancements for rolling stock, equipment, fixed facilities and other capital assets). Station improvements (e.g., platforms) are included.	☐	☐	☐	☑	☐	☐

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San Mateo 94666	New Commitment	SamTrans - transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include system expansion)	☐	☐	☐	☑	☐	☐
Santa Clara								
Santa Clara 20001	Committed	US 101/Bailey Avenue interchange improvements	☑	☐	☐	☐	☐	☑
Santa Clara 20002	New Commitment	Route 85 noise mitigation between I-280 and Route 87	☑	☐	☐	☐	☐	☐
Santa Clara 21742	Committed	River Oaks Parkway bike and pedestrian bridge at Guadalupe River	☑	☐	☐	☐	☐	☐
Santa Clara 21794	Committed	Bus Rapid Transit corridor: El Camino Real (Line 22) (Phase 1 and 2)	☑	☐	☐	☐	☐	☑
Santa Clara 21831	Committed	Montague Expressway level-of-service improvements from US 101 to North First Street	☑	☐	☐	☐	☐	☐
Santa Clara 21833	Committed	Almaden Expressway level-of-service improvements from Blossom Hill Road to Branham Lane	☑	☐	☐	☐	☐	☐
Santa Clara 21837	Committed	Capitol Expressway level-of-service improvements at McLaughlin Avenue	☑	☐	☐	☐	☐	☐
Santa Clara 21838	Committed	Foothill Expressway level-of-service improvements at various locations	☑	☐	☐	☐	☐	☐
Santa Clara 22176	New Commitment	Widen Berryessa Road from I-680 to Commercial Street from 4 lanes to 6 lanes	☑	☐	☐	☐	☐	☐
Santa Clara 22177	New Commitment	Widen Branham Lane from Vista Park Drive to Snell Avenue from 4 lanes to 6 lanes	☑	☐	☐	☐	☐	☐
Santa Clara 22183	New Commitment	Widen Lucretia Avenue from 2 lanes to 4 lanes from Story Road to Phelan Avenue	☑	☐	☐	☐	☐	☐
Santa Clara 22185	New Commitment	Widen Oakland Road from 4 lanes to 6 lanes from US 101 to Montague Expressway	☑	☐	☐	☐	☐	☐
Santa Clara 22246	New Commitment	Blossom Hill Road pedestrian overcrossing and improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22422	New Commitment	Widen Senter Road between Tully Road and Capitol Expressway to 6 lanes	☑	☐	☐	☐	☐	☐

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Santa Clara 22803	Committed	Bicycle Racks Program	☑	☐	☐	☐	☐	☐
Santa Clara 22810	New Commitment	San Martin Avenue/Monterey Road railroad crossing improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22811	New Commitment	Church Avenue/Monterey Highway railroad crossing improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22813	New Commitment	Wedgewood Avenue traffic and pedestrian safety improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22817	New Commitment	Widen Campbell Avenue to accommodate pedestrian and bicycle facilities	☑	☐	☐	☐	☐	☐
Santa Clara 22823	New Commitment	Widen Snell Avenue from 4 lanes to 6 lanes from Branham Lane to Chynoweth Avenue	☑	☐	☐	☐	☐	☐
Santa Clara 22826	New Commitment	Rengstorff Avenue grade separation at Central Expressway and Caltrain tracks	☑	☐	☐	☐	☐	☐
Santa Clara 22827	New Commitment	Magdalena Avenue/Country Club Drive intersection improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22828	New Commitment	Dixon Landing Road/North Milpitas Boulevard intersection improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22836	New Commitment	Widen Quito Road between Saratoga Avenue and Bucknall Road for channelization and pedestrian and bicycle lane improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22837	New Commitment	Saratoga Avenue and Saratoga-Sunnyvale Road corridor signalization improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22850	New Commitment	Widen Almaden Plaza Way for a fifth lane at the approach of the Route 85/Almaden Plaza Shopping Center/Alameda Expressway intersection	☑	☐	☐	☐	☐	☐
Santa Clara 22858	New Commitment	Widen Union Avenue from Los Gatos-Almaden Road to Ross Creek from 2 lanes to 4 lanes	☑	☐	☐	☐	☐	☐
Santa Clara 22859	New Commitment	Berryessa Creek Trail (Reach 3) between Abel Street and Gill Park	☑	☐	☐	☐	☐	☐
Santa Clara 22865	New Commitment	Coyote Creek trail from Route 237/Bay Trail to Story/Keyes	☑	☐	☐	☐	☐	☐

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Santa Clara 22867	New Commitment	Rancho Rinconada neighborhood traffic management plan	☑	☐	☐	☐	☐	☐
Santa Clara 22868	New Commitment	Park Avenue bicycle and pedestrian enhancements	☑	☐	☐	☐	☐	☐
Santa Clara 22872	New Commitment	Widen Montague Expressway for HOV lanes between I-880 and I-680 (6 mixed-flow, 2 HOV lanes)	☑	☐	☐	☐	☐	☐
Santa Clara 22876	New Commitment	Convert HOV lanes to mixed flow lanes on Lawerence Expressway from US 101 to Elko	☑	☐	☐	☐	☐	☑
Santa Clara 22880	New Commitment	Winchester Boulevard streetscape improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22887	New Commitment	Widen south side of Moody Road from Elena Road westbound by 1,500 feet to accommodate bicycle and pedestrian improvements	☑	☐	☐	☐	☐	☐
Santa Clara 22888	New Commitment	Widen King Road to 4 lanes from Aborn Road and Barberry Lane	☑	☐	☐	☐	☐	☐
Santa Clara 22896	New Commitment	Coyote Creek Trail (Reach 1) from North McCarthy Boulevard to South Ranch Drive	☑	☐	☐	☐	☐	☐
Santa Clara 98103	New Commitment	Construct auxiliary lane on northbound Route 17 from Camden Avenue to Hamilton Avenue (including improvements to northbound on-ramp from Camden Avenue)	☑	☐	☐	☐	☑	☐
Santa Clara 98119	Committed	Vasona Corridor light rail extension from downtown San Jose to Winchester Boulevard in Campbell	☑	☐	☐	☐	☐	☑
Santa Clara 98121	Committed	Increase Caltrain service from San Jose to Gilroy, includes Caltrain corridor facilities and service improvements	☑	☐	☐	☐	☐	☑
Santa Clara 21558	Committed	Foothill Expressway traffic and signal operational improvements from Edith Avenue to El Monte Avenue, and at Grant Avenue/St. Joseph Avenue intersection	☐	☑	☐	☐	☐	☐
Santa Clara 21703	Committed	I-880/Coleman Avenue interchange improvements	☐	☑	☐	☐	☐	☑
Santa Clara 21705	New Commitment	Route 237/El Camino Real/Grant Road intersection improvements	☐	☑	☐	☐	☐	☐

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Santa Clara 21713	New Commitment	Construct auxiliary lane on eastbound Route 237 from North First Street to Zanker Road	☐	☑	☐	☐	☐	☐
Santa Clara 21714	New Commitment	Widen US 101 between Monterey Highway and Route 25 (includes an extension to Santa Teresa Boulevard) and construct a full interchange at US 101/Route 25/Santa Teresa Boulevard	☐	☑	☐	☐	☐	☑
Santa Clara 21715	Committed	Route 152/Route 156 interchange improvements	☐	☑	☐	☐	☐	☑
Santa Clara 21716	New Commitment	Widen Route 237 from 4 lanes to 6 lanes for HOV lanes between Route 85 and east of Mathilda Avenue	☐	☑	☐	☐	☐	☑
Santa Clara 21717	New Commitment	Widen Route 25 from US 101 to Route 156 from 2 lanes to 6 lanes (includes new interchange at Route 156)	☐	☑	☐	☐	☐	☑
Santa Clara 21718	New Commitment	Route 85 northbound and southbound auxiliary lanes between Homestead Avenue and Fremont Avenue	☐	☑	☐	☐	☐	☐
Santa Clara 21719	New Commitment	I-880/I-280/Stevens Creek Boulevard interchange improvements (Phase I)	☐	☑	☐	☐	☐	☑
Santa Clara 21720	New Commitment	US 101/Tennant Avenue interchange improvements	☐	☑	☐	☐	☐	☑
Santa Clara 21722	New Commitment	US 101 southbound Trimble Road/De La Cruz Boulevard/Central Expressway interchange improvements	☐	☑	☐	☐	☐	☑
Santa Clara 21723	New Commitment	US 101/Tully Road interchange modifications	☐	☑	☐	☐	☑	☐
Santa Clara 21724	New Commitment	Widen US 101 for northbound and southbound auxiliary lane from Trimble Road to Montague Expressway	☐	☑	☐	☐	☐	☐
Santa Clara 21727	Committed	Route 87/US 101 ramp connection to Trimble Road interchange	☐	☑	☐	☐	☐	☑
Santa Clara 21729	Committed	Mary Avenue bicycle and pedestrian overcrossing at I-280	☐	☑	☐	☐	☐	☐
Santa Clara 21730	Committed	Los Gatos Creek Trail from Lincoln Avenue to Auzerais	☐	☑	☐	☐	☐	☐
Santa Clara 21731	Committed	Los Gatos Creek Trail from San Fernando Street to San Carlos Street	☐	☑	☐	☐	☐	☐

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Santa Clara 21733	Committed	Uvas Creek Class 1 Trail connection to Gilroy Sports Park (Phases 1 and 2 from Thomas Road Bridge to Gilroy Sports Park)	☐	☑	☐	☐	☐	☐
Santa Clara 21735	Committed	San Tomas Aquino Creek Trail (Route 237 to Santa Clara city limits)	☐	☑	☐	☐	☐	☐
Santa Clara 21737	Committed	Borregas Avenue bicycle and pedestrian overcrossings at US 101 and Route 237	☐	☑	☐	☐	☐	☐
Santa Clara 21738	Committed	West Little Llagas Creek bicycle and pedestrian pathway from Spring Road to Watsonville Road	☐	☑	☐	☐	☐	☐
Santa Clara 21739	Committed	Union Pacific bicycle and pedestrian overcrossing from Gibraltar Court to Montague Expressway	☐	☑	☐	☐	☐	☐
Santa Clara 21741	Committed	Bicycle and pedestrian improvements on Hamilton Avenue from Salmar to Creekside (Route 17)	☐	☑	☐	☐	☐	☐
Santa Clara 21743	Committed	Bicycle improvements on Almaden Expressway between Ironwood Drive and Foxworthy	☐	☑	☐	☐	☐	☐
Santa Clara 21744	New Commitment	Bike and pedestrian overcrossing at Caltrain railroad tracks near Brokaw Road	☐	☑	☐	☐	☐	☐
Santa Clara 21745	Committed	De Anza Trail (Reach 3)	☐	☑	☐	☐	☐	☐
Santa Clara 21746	Committed	Cox Avenue/Southern Pacific railroad intersection improvements; includes improvements to grade crossings and bicycle paths	☐	☑	☐	☐	☐	☐
Santa Clara 21749	New Commitment	Extend Butterfield Boulevard from Tennant Avenue to Watsonville Road	☐	☑	☐	☐	☐	☐
Santa Clara 21754	New Commitment	VTA Soundwall Program	☐	☑	☐	☐	☐	☐
Santa Clara 21760	Committed	Double-track segments of the Caltrain line between San Jose and Gilroy	☐	☑	☐	☐	☐	☑
Santa Clara 21768	Committed	Caltrain local station improvements	☐	☑	☐	☐	☐	☐
Santa Clara 21785	Committed	US 101/Blossom Hill Road interchange improvements	☐	☑	☐	☐	☐	☑
Santa Clara 21786	Committed	US 101/Hellyer Avenue interchange modifications	☐	☑	☐	☐	☐	☑

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Santa Clara 21832	Committed	Central Expressway level-of-service improvements from Bowers Avenue to De la Cruz Boulevard	☐	☑	☐	☐	☐	☐
Santa Clara 21836	New Commitment	San Tomas Expressway at Hamilton Avenue level-of-service improvements	☐	☑	☐	☐	☐	☐
Santa Clara 21921	Committed	BART extension into Santa Clara County (environmental, preliminary engineering and right-of-way acquisition)	☐	☑	☐	☐	☐	☑
Santa Clara 21922	Committed	San Jose International Airport connections to Guadalupe Light Rail Transit (LRT)	☐	☑	☐	☐	☐	☑
Santa Clara 21923	Committed	New Bus Rapid Transit Corridor: Stevens Creek Boulevard, El Camino Phase IIIB and Monterey Highway	☐	☑	☐	☐	☐	☑
Santa Clara 22010	New Commitment	Construct I-280 northbound second exit lane to Foothill Expressway	☐	☑	☐	☐	☐	☐
Santa Clara 22012	New Commitment	Route 237 eastbound auxiliary lane improvement from North First Street to Zanker Road	☐	☑	☐	☐	☐	☐
Santa Clara 22014	Committed	Downtown/East Valley: Santa Clara/Alum Rock and Capitol Expressway light-rail extension to Nieman Boulevard (environmental, preliminary engineering and righ-of-way acquistion)	☐	☑	☐	☐	☐	☑
Santa Clara 22015	New Commitment	I-680/I-880 cross connector (environmental and conceptual engineering)	☐	☑	☐	☐	☐	☑
Santa Clara 22018	New Commitment	US 101/Mathilda Avenue interchange improvements	☐	☑	☐	☐	☐	☑
Santa Clara 22022	New Commitment	Palo Alto Smart Residential Arterials	☐	☑	☐	☐	☐	☐
Santa Clara 22118	New Commitment	Extend Hill Road to Peet Avenue	☐	☑	☐	☐	☐	☐
Santa Clara 22121	New Commitment	Loyola Drive/Foothill Expressway intersection improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22134	New Commitment	Widen US 101 southbound from Story Road to Yerba Buena Road	☐	☑	☐	☐	☐	☑
Santa Clara 22138	New Commitment	Widen US 101 to 4 lanes from Route 25 to Santa Clara/San Benito County line	☐	☑	☐	☐	☐	☑

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Santa Clara 22142	New Commitment	US 101/Capitol Expressway interchange improvements (includes new northbound on-ramp from Yerba Buena Road)	☐	☑	☐	☐	☑	☑
Santa Clara 22145	New Commitment	Widen westbound Route 237 on-ramp from Route 237 to northbound US 101 to 2 lanes and add auxiliary lane on northbound US 101 from Route 237 on-ramp to Ellis Street interchange	☐	☑	☐	☐	☐	☑
Santa Clara 22152	New Commitment	Reconstruct Mathilda Avenue bridge over Caltrain tracks and Evelyn Avenue	☐	☑	☐	☐	☐	☐
Santa Clara 22156	New Commitment	Route 85 northbound to SR 237 eastbound connector ramp improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22162	New Commitment	Route 237 westbound to Route 85 southbound connector ramp improvements	☐	☑	☐	☐	☐	☑
Santa Clara 22164	New Commitment	Route 237 westbound on-ramp at Middlefield Road	☐	☑	☐	☐	☐	☑
Santa Clara 22168	New Commitment	Convert one-way streets to two-way streets at various intersections in San Jose	☐	☑	☐	☐	☐	☐
Santa Clara 22169	New Commitment	Widen Coleman Avenue from Hedding Street and a future Autumn Street extension from 4 lanes to 6 lanes	☐	☑	☐	☐	☐	☐
Santa Clara 22170	New Commitment	Construct I-880 overcrossing on Charcot Avenue between Paragon Drive and Old Oakland Road as a reliever route to Montague Expressway and Brokaw Road	☐	☑	☐	☐	☐	☐
Santa Clara 22171	New Commitment	Extend Autumn Street from Julian Street to Coleman Avenue to connect I-880 to west part of downtown San Jose	☐	☑	☐	☐	☐	☐
Santa Clara 22175	New Commitment	Widen Almaden Expressway between Coleman Road and Blossom Hill Road to 8 lanes	☐	☑	☐	☐	☐	☑
Santa Clara 22178	New Commitment	Replace 4-lane structure with 6-lane bridge on Calaveras Boulevard over Union Pacific Railroad from Abel Street to Milpitas Boulevard	☐	☑	☐	☐	☐	☐
Santa Clara 22179	New Commitment	Widen Central Expressway between Lawrence Expressway and San Tomas Expressway from 4 lanes to 6 lanes	☐	☑	☐	☐	☐	☑

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Santa Clara 22180	New Commitment	Widen Central Expressway between Lawrence Expressway and Mary Avenue to provide auxiliary acceleration and/or deceleration lanes	☐	☑	☐	☐	☐	☑
Santa Clara 22181	New Commitment	Construct 4-lane bridge over Guadalupe River between Almaden Expressway and Fell Avenue to connection sections of Chynoweth Avenue	☐	☑	☐	☐	☐	☐
Santa Clara 22182	New Commitment	Gilman Road/Arroyo Circle traffic signal and intersection improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22186	New Commitment	Widen San Tomas Expressway between Route 82 and Williams Road to 8 lanes	☐	☑	☐	☐	☐	☐
Santa Clara 22649	New Commitment	Widen Campbell Avenue Bridge over Los Gatos Creek to accommodate pedestrian and bicycle facilities	☐	☑	☐	☐	☐	☐
Santa Clara 22801	Committed	Bernardo Avenue pedestrian/bicycle undercrossing at Caltrain tracks	☐	☑	☐	☐	☐	☐
Santa Clara 22802	Committed	Extend Hetch Hetchy pathway from Los Altos Avenue to El Camino Real	☐	☑	☐	☐	☐	☐
Santa Clara 22805	New Commitment	Widen Dixon Landing Road from 4 to 6 lanes between North Milpitas Boulevard and 1-880	☐	☑	☐	☐	☐	☐
Santa Clara 22806	New Commitment	Capitol Avenue/Great Mall Parkway grade separation over Montague Expressway	☐	☑	☐	☐	☐	☐
Santa Clara 22807	New Commitment	Caltrain local station improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22809	New Commitment	DeWitt Avenue/Sunnyside Avenue intersection realignment	☐	☑	☐	☐	☐	☐
Santa Clara 22812	New Commitment	Capitol Expressway channelization improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22814	New Commitment	Extend Foothill Expressway westbound deceleration lane at San Antonio Road	☐	☑	☐	☐	☐	☐
Santa Clara 22815	New Commitment	Miramonte Avenue bikeway improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22816	New Commitment	Oregon-Page Mill Expressway corridor operational improvements	☐	☑	☐	☐	☐	☐

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Santa Clara 22818	New Commitment	Expressway and city street signals coordination	☐	☑	☐	☐	☐	☐
Santa Clara 22820	New Commitment	Expressway traffic signal system upgrade to allow traffic count collection	☐	☑	☐	☐	☐	☐
Santa Clara 22822	Committed	Expressway traffic information outlets	☐	☑	☐	☐	☐	☐
Santa Clara 22829	New Commitment	Fitzgerald Road/Masten Avenue intersection improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22830	New Commitment	Widen First Street/Route 152 to add one eastbound lane from Church Street to Monterey Street	☐	☑	☐	☐	☐	☐
Santa Clara 22831	New Commitment	Install traffic signal interconnect systems in Sunnyvale, Palo Alto, Mountain View and Los Altos	☐	☑	☐	☐	☐	☐
Santa Clara 22832	New Commitment	Widen Route 152 from 2 lanes to 4 lanes from Miller Slough to Holsclaw Road (including widen existing structures over Llagas Creek and old Llagas Creek and new traffic signal at Gilroy Foods/WTI Trucking entrance)	☐	☑	☐	☐	☐	☑
Santa Clara 22833	New Commitment	Route 85/Almaden Expressway interim operational improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22834	New Commitment	Widen Route 237 for eastbound auxiliary lane from Mathilda Avenue to Fair Oaks Avenue	☐	☑	☐	☐	☐	☐
Santa Clara 22835	New Commitment	Construct Sunnyvale Caltrain Station overpass/underpass for pedestrians and bicyclists	☐	☑	☐	☐	☐	☐
Santa Clara 22838	New Commitment	Study of Lawrence Expressway/Calvert/I-280 interchange improvements (Caltrans Project Study Report)	☐	☑	☐	☐	☐	☐
Santa Clara 22839	New Commitment	Convert HOV lane to mixed-flow lane on Central Expressway between San Tomas and De La Cruz (including removing HOV queue jump lanes at Bowers)	☐	☑	☐	☐	☐	☑
Santa Clara 22840	New Commitment	Study to reconfigure Route 85/Almaden Expressway interchange (Caltrans Project Study Report/Project Development Study)	☐	☑	☐	☐	☐	☐
Santa Clara 22841	New Commitment	Los Gatos Creek Trail from San Carlos Street to Guadalupe River	☐	☑	☐	☐	☐	☐

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Santa Clara 22842	New Commitment	Route 152/Ferguson Road intersection improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22844	New Commitment	Construct right-turn lane from westbound Monroe Street to San Tomas Expressway	☐	☑	☐	☐	☐	☐
Santa Clara 22845	New Commitment	Construct US 101 southbound auxiliary lane from Ellis Street to eastbound Route 237	☐	☑	☐	☐	☐	☐
Santa Clara 22846	New Commitment	Stevens Creek Trail Reach 4 Central from North Meadow to Dale Neighborhood	☐	☑	☐	☐	☐	☐
Santa Clara 22847	New Commitment	Route 9 bike lanes from Saratoga through Monte Sereno to Los Gatos	☐	☑	☐	☐	☐	☐
Santa Clara 22848	New Commitment	Develop High Occupancy Toll (HOT) lane demonstration project on one freeway corridor in Santa Clara County	☐	☑	☐	☐	☐	☑
Santa Clara 22852	New Commitment	Coyote Creek Trail from Hellyer County Park to Anderson Lake County Park	☐	☑	☐	☐	☐	☐
Santa Clara 22853	New Commitment	Alma Bridge replacement feasibility study	☐	☑	☐	☐	☐	☐
Santa Clara 22854	New Commitment	I-280/Oregon-Page Mill interchange modification	☐	☑	☐	☐	☐	☐
Santa Clara 22855	New Commitment	Coyote Creek Trail connection	☐	☑	☐	☐	☐	☐
Santa Clara 22856	New Commitment	Lawrence Expressway-Saratoga Avenue Corridor signal optimization	☐	☑	☐	☐	☐	☐
Santa Clara 22857	New Commitment	Widen US 101 for a southbound auxiliary lane from I-880 to McKee Road/Julian Street	☐	☑	☐	☐	☐	☐
Santa Clara 22860	New Commitment	Replace California Avenue undercrossing of Caltrain tracks and Alama Street	☐	☑	☐	☐	☐	☐
Santa Clara 22861	New Commitment	Bicycle boulevards and bike lanes network	☐	☑	☐	☐	☐	☐
Santa Clara 22862	New Commitment	Alum Rock School District Area traffic-calming elements	☐	☑	☐	☐	☐	☐
Santa Clara 22863	New Commitment	Borregas Avenue bike lanes	☐	☑	☐	☐	☐	☐

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Santa Clara 22864	New Commitment	Bollinger Road bike lanes from Anza Boulevard and Lawrence Expressway/Miller Boulevard	☐	☑	☐	☐	☐	☐
Santa Clara 22866	New Commitment	I-280/Lawrence Expressway signal phasing and timing coordination	☐	☑	☐	☐	☐	☐
Santa Clara 22869	New Commitment	Guadalupe River Trail from Alviso to I-880	☐	☑	☐	☐	☐	☐
Santa Clara 22870	New Commitment	Study of Uvas Creek trail extension from Gilroy Sports Park to Gavilan College	☐	☑	☐	☐	☐	☐
Santa Clara 22871	New Commitment	Extend 2-lane Uvas Park Drive from Laurel Drive to Wren Avenue	☐	☑	☐	☐	☐	☐
Santa Clara 22873	New Commitment	Replace Loyola Bridge bicycle/pedestrian crossing over Foothill Expressway	☐	☑	☐	☐	☐	☐
Santa Clara 22874	New Commitment	Route 85/Fremont Avenue ramp improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22875	New Commitment	Widen Campbell Avenue Bridge over Los Gatos Creek for pedestrians and bicyclists	☐	☑	☐	☐	☐	☐
Santa Clara 22877	New Commitment	Design and construct bicycle/pedestrian trail along Sunnyvale east drainage trail from JWC Greenway to Tasman Drive	☐	☑	☐	☐	☐	☐
Santa Clara 22878	New Commitment	Realign Wildwood Avenue to connect with Lawrence Expressway (includes new traffic signal at Lawrence Expressway/Wildwood Avenue intersection)	☐	☑	☐	☐	☐	☐
Santa Clara 22879	New Commitment	US 101 bike/pedestrian overcrossing at Branham Lane	☐	☑	☐	☐	☐	☐
Santa Clara 22881	New Commitment	Construct auxiliary lanes Lawrence Expressway from westbound Route 237 to southbound Lawrence Expressway and from northbound Lawrence Expressway to eastbound Route 237	☐	☑	☐	☐	☐	☐
Santa Clara 22882	New Commitment	Bascom Avenue Intelligent Transportation System (ITS) enhancements	☐	☑	☐	☐	☐	☐
Santa Clara 22883	New Commitment	Modify medians on Lawrence Expressway from De Sota Avenue and St. Lawrence Drive/Lawrence Station Road for limited access	☐	☑	☐	☐	☐	☐
Santa Clara 22884	New Commitment	Construct bike lanes on Evelyn Avenue from Sunnyvale Avenue to Reed Avenue	☐	☑	☐	☐	☐	☐

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Santa Clara 22885	New Commitment	Extend Los Gatos Creek Trail on west side from Hamilton Avenue to Campbell Avenue	☐	☑	☐	☐	☐	☐
Santa Clara 22886	New Commitment	Widen McKean Road shoulders to accommodate bicycle improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22889	New Commitment	Stevens Creek Trail (Reach 4) south from Dale Neighborhood to Mountain View High School	☐	☑	☐	☐	☐	☐
Santa Clara 22890	New Commitment	Adobe Creek bike/pedestrian bridge replacement	☐	☑	☐	☐	☐	☐
Santa Clara 22891	New Commitment	Alamden Expressway pedestrian/bike overcrossing	☐	☑	☐	☐	☐	☐
Santa Clara 22892	New Commitment	Widen US 101 southbound auxiliary lane from Great America Parkway to Lawrence Expressway	☐	☑	☐	☐	☐	☐
Santa Clara 22893	New Commitment	Widen US 101 for a northbound auxiliary lane from McKee/Julian Street to I-880	☐	☑	☐	☐	☐	☐
Santa Clara 22894	New Commitment	US 101 Mabury Road/Taylor Street new interchange (environmental and preliminary engineering)	☐	☑	☐	☐	☐	☐
Santa Clara 22895	New Commitment	San Tomas Expressway/Route 17 interchange operational improvements	☐	☑	☐	☐	☐	☐
Santa Clara 22897	New Commitment	Widen I-680 northbound for an HOV lane from Route 84 to Calavaras Boulevard	☐	☑	☐	☐	☐	☑
Santa Clara 22979	New Commitment	US 101/Zanker Road/Skyport Drive/Fourth Street interchange improvements (environmental and preliminary engineering)	☐	☑	☐	☐	☐	☐
Santa Clara 94117	Committed	Transit centers and park-and-ride lots	☐	☑	☐	☐	☐	☐
Santa Clara 96002	Committed	Route 152 safety improvements from Uvas Creek to Route 156 near Gilroy	☐	☑	☐	☐	☐	☐
Santa Clara 98140	Committed	I-680 Sunol Grade southbound HOV lanes, ramp metering and auxiliary lane from Route 84 to Route 237 (possible value pricing project)	☐	☑	☐	☐	☐	☑
Santa Clara 98175	New Commitment	Widen Montague Expressway from 6 lanes to 8 lanes (6 mixed-flow and 2 HOV lanes) from I-680 to US 101	☐	☑	☐	☐	☐	☑

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Santa Clara 21750	Committed	VTA Landscape Restoration and Graffiti Removal Program	☐	☐	☑	☐	☐	☐
Santa Clara 22140	New Commitment	Widen US 101 between Cochrane Road and Monterey Highway from 6 lanes to 8 lanes	☐	☐	☑	☐	☐	☑
Santa Clara 22153	New Commitment	Extend Mary Avenue north across Route 237	☐	☐	☑	☐	☐	☐
Santa Clara 22804	Committed	Feasibility study of Stevens Creek Trail connection between Mountain View and Cupertino	☐	☐	☑	☐	☐	☐
Santa Clara 22843	New Commitment	Widen Lawrence Expressway between Moorpark/Bollinger and south of Calvert from 6 lanes to 8 lanes	☐	☐	☑	☐	☐	☐
Santa Clara 22903	New Commitment	Non-Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement maintenance	☐	☐	☑	☐	☐	☐
Santa Clara 22987	New Commitment	Java Drive bikeway between Mathilda Avenue and Crossman Avenue	☐	☐	☑	☐	☐	☐
Santa Clara 21787	Committed	Palo Alto Intermodal Transit Center (Phase I)	☐	☐	☐	☑	☐	☑
Santa Clara 21797	Committed	Route 17 bus service improvements between downtown San Jose and downtown Santa Cruz	☐	☐	☐	☑	☐	☑
Santa Clara 21868	Committed	Local bridge maintenance	☐	☐	☐	☑	☐	☐
Santa Clara 22480	New Commitment	BART (Santa Clara County share) - transit operating and capital improvement program (including replacement, rehabilitation, and minor enhancements, equipment, fixed facilities and other capital assets; does not include expansion except BART to SFO extension)	☐	☐	☐	☑	☐	☐
Santa Clara 22819	New Commitment	Santa Teresa Boulevard/Fitzgerald Avenue intersection improvements	☐	☐	☐	☑	☐	☐
Santa Clara 22821	New Commitment	Transportation for Livable Communities (TLC) and Pedestrian Program	☐	☐	☐	☑	☐	☐
Santa Clara 22902	Committed	Future rail corridors to be determined by Major Investment Studies (MIS)	☐	☐	☐	☑	☐	☐

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Santa Clara 94106	New Commitment	Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation shortfall	☐	☐	☐	☑	☐	☐
Santa Clara 94609	Committed	Local streets and roads pavement and non-pavement maintenance	☐	☐	☐	☑	☐	☐
Santa Clara 94610	Committed	VTA - transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets. Does not include system expansion)	☐	☐	☐	☑	☐	☐
Santa Clara 94613	Committed	Caltrain (Santa Clara County portion) transit operating and capital improvement program (including replacement, rehabilitation and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include system expansion)	☐	☐	☐	☑	☐	☐
Solano								
Solano 22623	Committed	Widen Nut Tree overcrossing from 2 lanes to 4 lanes (includes left turn lane and ramp improvements)	☑	☐	☐	☐	☐	☐
Solano 22628	Committed	Realign Wilson Avenue from Florida to Route 37 to accommodate pedestrians and bicyclists (Phase 2)	☑	☐	☐	☐	☐	☐
Solano 22633	Committed	Widen Azuar Drive/Cedar Avenue from P Street to Residential Parkway from 2 lanes to 4 lanes	☑	☐	☐	☐	☐	☐
Solano 22986	Committed	Widen and improve Broadway between Route 37 and Mini Drive from 2 lanes to 4 lanes	☑	☐	☐	☐	☐	☐
Solano 94150	Committed	I-80/I-680/Route 12 interchange improvements (Phase 1); includes 2-lane connectors between I-80 and I-680 and a fifth lane in each direction on I-80 between I-680 and Route 12	☑	☐	☐	☐	☐	☑
Solano 94675	Committed	Widen Route 37 from Napa River Bridge to Route 29 from 2-lane expressway to 4-lane freeway (not including Routes 29/37 interchange), planting and environmental mitigation	☑	☐	☐	☐	☐	☑
Solano 21341	Committed	Fairfield/Vacaville multi-modal rail station for Capitol Corridor intercity rail service in Solano County (Phases 1, 2, and 3)	☐	☑	☐	☐	☑	☐

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Solano 21807	New Commitment	I-80/I-680/Route 12 interchange improvements (Phase 2); includes widen I-80 from Route 12 to Air Base Parkway for HOV lanes (includes a braided ramp from I-680 to Suisun Valley Road and improvements to Red Top Road)	☐	☑	☐	☐	☐	☑
Solano 21823	New Commitment	Route 12 from Sacramento River to I-80 (Phase 1) operational and safety improvements (as identified in Route 12 Major Investment Study (MIS))	☐	☑	☐	☐	☐	☑
Solano 22625	Committed	I-80/North Texas Street interchange improvements (includes relocation of North Texas Street, new connection between Manuel Campos Parkway and existing bridge, new eastbound on- and off-ramps and new bridge)	☐	☑	☐	☐	☐	☑
Solano 22626	Committed	Route 29/Route 37 interchange improvements (includes new 4-lane freeway on new alignment between Enterprise Street and Diablo Street)	☐	☑	☐	☐	☐	☑
Solano 22629	Committed	New Vallejo Ferry Terminal intermodal facility	☐	☑	☐	☐	☐	☐
Solano 22630	Committed	Parkway Boulevard overcrossing of Union Pacific Railroad grade separation	☐	☑	☐	☐	☐	☐
Solano 22631	Committed	Route 12 westbound (Red Top Road) truck lane	☐	☑	☐	☐	☐	☑
Solano 22632	Committed	American Canyon Road ramp improvements at I-80	☐	☑	☐	☐	☐	☐
Solano 22634	New Commitment	Vacaville intermodal station (400-space parking garage and 200-space surface parking lot)	☐	☑	☐	☐	☑	☐
Solano 22700	New Commitment	Construct parallel corridor north of I-80 from Red Top Road to Abernathy Road (the western section extends from the railroad crossing on Red Top Road to Business Center Drive)	☐	☑	☐	☐	☐	☑
Solano 22794	New Commitment	Curtola Transit Center improvements (construct parking structure, improve off-street bus transfer facilities and improve bus ingress and egress)	☐	☑	☐	☐	☐	☐
Solano 22795	New Commitment	Fairfield Transportation Center improvements (Phase 3) (add 600 parking spaces)	☐	☑	☐	☐	☐	☐
Solano 22898	New Commitment	Widen I-80 from west of Meridian Road to west of Kidwell Road from 6 lanes to 8 lanes	☐	☑	☐	☐	☐	☑
Solano 22985	Committed	Benicia Intermodal Transportation Station	☐	☑	☐	☐	☑	☐

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Solano 94148	New Commitment	Construct rail stations and track improvements for Amtrak Capitol Corridor service from Sacramento to Oakland	☐	☑	☐	☐	☐	☑
Solano 94151	New Commitment	Construct 4-lane Jepson Parkway from Route 12 to Leisure Town Road	☐	☑	☐	☐	☐	☑
Solano 21348	Committed	Install a second span along existing Green Valley Bridge to facilitate four lanes of travel	☐	☐	☑	☐	☐	☐
Solano 21809	New Commitment	Match for improvements to local interchanges and arterials	☐	☐	☑	☐	☐	☐
Solano 22701	New Commitment	I-80/I-680/Route 12 interchange improvements (Phase 3 partial); includes relocation/reconstruction of Cordelia truck scales, ramp improvements and auxiliary lanes (as identified in I-80/I-680/I-780 Corridor Study)	☐	☐	☑	☐	☐	☑
Solano 22703	New Commitment	I-80/I-680/I-780 corridor mid-term capacity and operation improvements except transit hubs and park and ride lots (as identified in I-80/I-680/I-780 Corridor Study)	☐	☐	☑	☐	☐	☑
Solano 22708	New Commitment	Route 12 from I-80 to Sacramento Bridge safety improvements (as identified in Route 12 Major Investment Study(MIS))	☐	☐	☑	☐	☐	☐
Solano 94139	New Commitment	Non-Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement maintenance shortfall	☐	☐	☑	☐	☐	☐
Solano 21869	Committed	Local bridge maintenance	☐	☐	☐	☑	☐	☐
Solano 94138	New Commitment	Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation shortfall	☐	☐	☐	☑	☐	☐
Solano 94152	New Commitment	Widen Route 12 (Jameson Canyon) from I-80 in Solano County to Route 29 in Napa County from 2 lanes to 4 lanes (Solano County portion of project)	☐	☐	☐	☑	☐	☑
Solano 94153	New Commitment	Non-capacity increasing safety projects to improve congested intersections, local arterials and highways	☐	☐	☐	☑	☐	☐
Solano 94681	Committed	Local streets and roads pavement and non-pavement maintenance	☐	☐	☐	☑	☐	☐

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Solano 94683	New Commitment	Vallejo Transit - transit operating and capital improvement program (including replacement, rehabilitation, and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include system expansion)	☐	☐	☐	☑	☐	☐
Solano 98168	New Commitment	Intercity bus service and transit hubs in Solano County (capital costs)	☐	☐	☐	☑	☐	☐
Solano 98212	New Commitment	Local bicycle and pedestrian projects	☐	☐	☐	☑	☐	☐
Sonoma								
Sonoma 21346	Committed	Widen Route 116 onramp to southbound US 101	☑	☐	☐	☐	☐	☑
Sonoma 22190	Committed	Hwy 116/Hwy 121 intersection improvements and Arnold Drive improvements	☑	☐	☐	☐	☐	☐
Sonoma 94165	Committed	US 101 northbound and southbound HOV lanes from Route 12 to Steele Lane in Santa Rosa	☑	☐	☐	☐	☐	☑
Sonoma 94691	Committed	Route 121 traffic signal system and channelization at 8th Street	☑	☐	☐	☐	☐	☐
Sonoma 21070	Committed	Realign Route 116 (Stage Gulch Road) along Champlin Creek and widen remaining segments to accommodate pedestrians and bicyclists	☐	☑	☐	☐	☐	☐
Sonoma 21902	New Commitment	Widen US 101 for HOV lanes from Old Redwood Highway to Rohnert Park Expressway	☐	☑	☐	☐	☐	☑
Sonoma 21998	Committed	Rehabilitate and widen Route 116 between Elphick Road to Redwood Drive (involves realignment, new shoulders and channelization improvements)	☐	☑	☐	☐	☐	☐
Sonoma 22193	Committed	Construct Forestville bypass on Route 116	☐	☑	☐	☐	☐	☐
Sonoma 22203	Committed	River Road channelization and signals from Fulton Road to the town of Guerneville	☐	☑	☐	☐	☐	☐
Sonoma 22207	Committed	Extend Farmers Lane as a 3-lane or 4-lane arterial from Bellevue Avenue to Route 12	☐	☑	☐	☐	☐	☐
Sonoma 22438	Committed	Bodega Highway improvements west of Sebastopol	☐	☑	☐	☐	☐	☐
Sonoma 22439	Committed	Bicycle and pedestrian routes	☐	☑	☐	☐	☐	☐

*Committed refers to those projects with programmed local, regional, state, or federal funds; New Commitment refers to those projects that will seek discretionary funds to be available over the long term of the Transportation 2030 Plan.
**Projects amended into 2005 TIP (Amendment #05-05), including early phases for some projects with post-2006 completion years.

Appendix B: Transportation 2030 Financially Constrained Element Projects by County (by analysis year)

RTP ID	Investment*	Project / Program	Complete and Operational By: 2006 / 2007	2015	2025	2030	2005 TIP/ 05-05**	Reg'l Signif.
Sonoma 22443	Committed	Design, project development, and financing costs for widening US 101	☐	☑	☐	☐	☐	☐
Sonoma 22490	Committed	Convert bridges of Sonoma County from one-lane to two-lane bridges	☐	☑	☐	☐	☐	☐
Sonoma 22652	Committed	Rehabilitate pavement on US 101 from Steele Lane to Grant overhead in Healdsburg	☐	☑	☐	☐	☐	☐
Sonoma 22655	Committed	Widen US 101 for HOV lanes (one in each direction) from Rohnert Park Expressway to Santa Rosa Avenue (includes interchange improvements and ramp metering)	☐	☑	☐	☐	☐	☑
Sonoma 22656	Committed	US 101/East Washington Street interchange improvements	☐	☑	☐	☐	☑	☐
Sonoma 94689	Committed	US 101/Arata Lane interchange improvements in Windsor (Phase 2)	☐	☑	☐	☐	☐	☑
Sonoma 98147	New Commitment	Widen US 101 (adding an HOV lane in each direction) from the Marin/Sonoma County line north to Old Redwood Highway in Petaluma and convert some highway sections from expressway to freeway	☐	☑	☐	☐	☐	☑
Sonoma 98183	New Commitment	Widen US 101 for HOV lanes between Steele Lane and Windsor River Road	☐	☑	☐	☐	☐	☑
Sonoma 22191	Committed	US 101/Airport Boulevard interchange improvements and Airport Boulevard widening from 2 to 4 lanes (includes a center turn lane)	☐	☐	☑	☐	☐	☑
Sonoma 22194	Committed	Mark West Springs Road/Porter Creek Road safety improvements	☐	☐	☑	☐	☐	☐
Sonoma 22195	Committed	Old Redwood Highway/US 101 interchange improvements	☐	☐	☑	☐	☐	☐
Sonoma 22197	Committed	Penngrove local road improvements including Railroad Avenue interchange	☐	☐	☑	☐	☐	☐
Sonoma 22204	Committed	Widen Fulton Road from Guerneville Road to US 101 from 2 lanes to 4 lanes and construct Route 12/Fulton Road interchange	☐	☐	☑	☐	☐	☐
Sonoma 22205	Committed	US 101/Hearn Avenue interchange improvements; including widening overcrossing and ramps	☐	☐	☑	☐	☐	☐

*Committed refers to those projects with programmed local, regional, state, or federal funds; New Commitment refers to those projects that will seek discretionary funds to be available over the long term of the Transportation 2030 Plan.
**Projects amended into 2005 TIP (Amendment #05-05), including early phases for some projects with post-2006 completion years.

Appendix B: Transportation 2030 Financially Constrained Element Projects by County (by analysis year)

RTP ID	Investment*	Project / Program	Complete and Operational By: 2006 / 2007	2015	2025	2030	2005 TIP/ 05-05**	Reg'l Signif.
Sonoma 98213	Committed	Bicycle and pedestrian projects	☐	☐	☑	☐	☐	☐
Sonoma 21870	Committed	Local bridge maintenance	☐	☐	☐	☑	☐	☐
Sonoma 22440	Committed	Local streets and roads: pothole repair and congestion relief	☐	☐	☐	☑	☐	☐
Sonoma 22441	Committed	Local bus service (includes express bus, evening service, and transit for seniors and disabled)	☐	☐	☐	☑	☐	☐
Sonoma 94155	New Commitment	Metropolitan Transportation System (MTS) streets and roads pavement and non-pavement rehabilitation shortfall	☐	☐	☐	☑	☐	☐
Sonoma 94694	Committed	Local streets and roads pavement and non-pavement maintenance	☐	☐	☐	☑	☐	☐
Sonoma 98572	New Commitment	Golden Gate Transit (Sonoma County share) - Transit operating and capital improvement program (including replacement, rehabilitation, and minor enhancements for rolling stock, equipment, fixed facilities and other capital assets; does not include expansion)	☐	☐	☐	☑	☐	☐

*Committed refers to those projects with programmed local, regional, state, or federal funds; New Commitment refers to those projects that will seek discretionary funds to be available over the long term of the Transportation 2030 Plan.
**Projects amended into 2005 TIP (Amendment #05-05), including early phases for some projects with post-2006 completion years.

APPENDIX C

TRAVEL FORECASTING ASSUMPTIONS FOR TRANSPORTATION 2030 AND 2005 TRANSPORTATION IMPROVEMENT PROGRAM/ AMENDMENT #05-05

Travel Forecasting Assumptions for Conformity Analysis of Transportation 2030 Plan and 2005 Transportation Improvement Program/Amendment #05-05

This report documents the travel forecasting assumptions for the Transportation 2030 Plan (the 2005 update to the Regional Transportation Plan (RTP)) and 2005 Transportation Improvement Program (TIP)/Amendment #05-05, and includes the following analysis years: 2006, 2007, 2015, 2025, and 2030. The analysis is based on the "latest planning assumptions" as documented below. In addition, the current conformity analysis also uses the latest upgrades to the MTC travel demand forecast model, which was updated and re-validated to a 2000 base year in Spring 2004.

The vehicle travel forecasts from the MTC travel demand model are then used in conjunction with the California Air Resource Board's (ARB) motor vehicle emission model (EMFAC2002) to estimate total regional on road motor vehicle emissions.

In preparing these travel forecasts, MTC uses four basic sets of assumptions:

- Pricing Assumptions;
- Travel Behavior Assumptions;
- Demographic Assumptions; and
- Highway and Transit Network Assumptions.

Demographic and detailed highway and transit network definition assumptions are not included in this appendix. The RTP travel forecasts are based on the socio-economic/land use forecast series *Projections 2003,* developed by the Association of Bay Area Governments (ABAG). These projections reflect the new regional "Smart Growth" land use assumptions and have been approved for use in the conformity analysis by the US DOT and EPA, subject to periodic preparation of a monitoring report by ABAG to examine results and review assumptions used in the projections. The projections also reflect the near term effects of the current economic slowdown on job creation in the Bay Area.

Pricing assumptions include projected parking prices; gasoline and non-gasoline auto operating costs; fuel economy; bridge tolls; and transit fares.

Travel behavior assumptions include trip peaking factors, vehicle occupancy factors, and estimates of interregional commuters.

Additional travel forecasting methodology issues are addressed in this report. These are special methodological issues related to air quality and mobile source emissions inventories. The methodology issues include:

- Commercial Vehicle Methodology;
- Speed Post-Processing Methodology;
- Distribution of VMT by Speed Methodology; and
- Adjustment of Regional VMT and Trips.

I. Pricing Assumptions

A. Parking Costs

The MTC demand models were estimated using nominal, or posted parking prices as opposed to actual parking prices. Actual parking prices would be the average parking price paid by a consumer, weighted by those who are subsidized by their employer and those who are not subsidized by their employer. For peak period parking cost, the monthly posted parking price is divided by 22 days per month to derive an average

workday parking cost. The average workday parking cost is then divided by 8 hours to derive an average peak hour parking cost per hour in 1990 cents. In the home-based work mode choice model application, the per hour charge is multiplied by 8 hours, then divided by 2, to derive a per vehicle trip charge. Next, the per vehicle trip charge is divided by the vehicle occupancy so that parking costs are equally distributed between vehicle drivers and passengers.

Base year 2000 and forecast years 2006, 2007, 2015, 2025 and 2030 peak hour parking costs, by the MTC 1454 zone system, are shown in Table 1. Off-peak per hour parking costs –2000, 2006, 2007, 2015, 2025 and 2030 – are shown in Table 2.

The MTC assumption for parking costs is that they will change, in real terms, by the ratio of the net total employment density in the target year to the net employment density in the base year (2000). This differs from previous sets of forecasting assumptions, which used a one to three percent per year growth rate, irrespective of the change in employment density.

MTC staff periodically inventory parking garages throughout the Bay Area to monitor trends in parking prices. The most recent update to this inventory was conducted fall 2000.

Auto Operating Costs

The MTC travel demand models are based on non-linear auto operating costs which vary according to trip speed and distance. As speed increases, the fuel consumption rate (gallons per mile) decreases linearly. As distance increases, the share of "cold start" fuel consumption decreases. This internal model is used to derive trip-specific fuel economy (miles per gallon) which is multiplied by the per gallon gas price to derive per trip gasoline operating cost. A constant non-gasoline operating cost per mile is multiplied by trip distance to get per trip non-gas cost. Total auto operating cost per trip is the sum of the gasoline cost per trip plus the non-gasoline cost per trip plus any bridge tolls or parking charges. Details on the auto operating cost model are included in the BAYCAST Users Guide (August 2004).

The MTC auto operating cost model is based on work conducted by Cambridge Systematics, Inc., as part of the *Urban Transportation Energy Conservation* study, published in 1978 (known as "UTEC"). The UTEC models were also used to derive auto operating costs for the Southern California Association of Governments' current set of travel demand models.

The basic inputs to the BAYCAST model system, in terms of auto operating cost, are gasoline price (in 1990 constant dollars); the fuel correction factor (to represent fleet turnover and more fuel efficient vehicles); and the non-gasoline operating cost (in 1990 cents per mile.) Data on historical, 1990 to 2003, and assumed future year auto operating costs are detailed in Table 3 and Figures 1 and 2.

The notes to Table 3 indicate some of the major assumptions going into these auto operating cost forecasts. For gasoline prices, MTC uses future gas price estimates provided by the California Energy Commission (CEC) and the US Department of Energy's Energy Information Administration (EIA). These agencies predict gas prices in the range of $1.09 per gallon (CEC) to $1.38/gallon (EIA) (in 1990 constant dollars.) The current assumption for years 2005 through 2025 is that gas prices will remain at their 2000 level, that is, $1.83 per gallon in current (2000) dollars. Gas prices are reflected through December 2003. However, the gas prices for 2004 are higher than we assumed. The higher costs would suppress vehicle trips; therefore we are taking a conservative approach to the air quality analysis.

MTC is assuming no change in fuel economy relative to 1990. This respects the overall fuel economy trend as established by the US Energy Information Agency (EIA) in their "Household Vehicles Energy Consumption Report" (September 1997.) The EIA found no significant increase in overall passenger vehicle fuel economy between their national surveys conducted in 1988 and 1994. Overall this means that

we are projecting that total auto operating cost per mile (gasoline + non-gasoline) will remain at 10.22 cents per mile between 2000 and 2025 (all in 1990 constant dollars).

Table 9 shows the ratio of San Francisco to Los Angeles gas prices between January 2001 and December 2003. Over this time period, San Francisco gas prices have been, on average, four percent higher than Los Angeles gas prices. This is not a significant difference, so the recommendation is to use the CEC statewide gas price forecast unadjusted for Bay Area price differential.

The other key assumption is that non-gasoline operating cost (maintenance and repair, motor oil, parts, accessories) is 40 percent of total auto operating costs. This 40 percent figure is based on US Bureau of Labor Statistics data on consumer expenditures (see Table 4 of the MTC report: *Consumer Price Indices: Bay Area & U.S. Cities: 1950-2001*.) In a typical household, between five and six percent of a household's expenditures are related to auto operating costs. Gasoline cost has fluctuated from 55.6 percent to 73.5 percent of total auto operating costs over the past twenty years.

Auto ownership costs, which now comprise around 7.3 percent of the average household's budget, are not used in determining trip running, or variable costs. Auto ownership costs includes the cost of new or used vehicle purchasing and financing, insurance premiums, and vehicle registration and licensing fees. These fixed costs of auto ownership are more important in determining the number and quality of vehicles to own or lease. Given the difficulty in projecting automobile quality and costs, household income is used as a surrogate in predicting auto ownership levels.

C. Bridge Tolls

Bay Area voters approved Regional Measure 2 on the March 2, 2004 general election. This measure increases the toll on all Bay Area state-owned bridges from $2.00 to $3.00 as of July 1, 2004. Bay Area state-owned bridge tolls are scheduled to remain at $3.00 for the duration of the long-range planning period (Table 4, Figure 3). Given an inflation assumption of 3 percent per year, a year 2025 toll of $3.00 is equivalent to 105 cents in 1990 constant dollars (Table 10). This MTC bridge toll assumption is consistent with the financial forecasting assumptions used in projecting bridge toll revenues.

Note that discounted commute tickets were phased out with the introduction of FASTRAK (electronic toll collection) in 2000 and 2001. FASTRAK tolls were also discounted by 15 percent, but these FASTRAK discounts were discontinued in early 2002.

The Golden Gate Bridge District has also introduced FASTRAK, and has also eliminated commute discounts as of June 2001.

All Bay Area bridges had a standard automobile toll of $1.00 per crossing in 1990. Commute ticket booklets offered 15 to 32 percent discounts off of the $1.00 toll, as follows:

1990 Base Year Bridge Tolls

Bay Area Bridges	Auto Toll	Commute Tickets	Commuter Toll ($/ticket)	Free Toll for SR3+ During Peak Period?
Antioch	$1.00	$27 / 40 tickets	$0.68	No
Benicia/Martinez	$1.00	$27 / 40 tickets	$0.68	No
Carquinez	$1.00	$27 / 40 tickets	$0.68	No
Richmond/San Rafael	$1.00	$34 / 40 tickets	$0.85	Yes (since 10/89)
Golden Gate	$1.00	$20 / 23 tickets	$0.87	Yes
SF/Oakland Bay	$1.00	$34 / 40 tickets	$0.85	Yes
San Mateo/Hayward	$1.00	$34 / 40 tickets	$0.85	Yes
Dumbarton	$1.00	$34 / 40 tickets	$0.85	Yes

For the state-owned bridges for FY 1989/90, MTC staff calculated an average auto toll weighted on commuter ticket usage and full toll usage, as follows:

Computation of Average Auto Toll, 1989/90

Bay Area Bridges	Commuter Tickets	Total Autos & Trailers	Tickets as % of Total	Average Auto Toll
Antioch	225,569	1,605,516	14%	$0.96
Benicia/Martinez	3,696,160	13,643,902	27%	$0.91
Carquinez	4,724,623	17,585,673	27%	$0.91
Richmond/San Rafael	1,257,179	8,428,199	15%	$0.95
SF/Oakland Bay	4,227,393	36,521,920	12%	$0.96
San Mateo/Hayward	1,845,246	12,131,171	15%	$0.95
Dumbarton	2,085,757	8,381,841	25%	$0.92

The average toll for the Golden Gate Bridge was 94 cents per revenue vehicle between July and December 1990 (source: Golden Gate Bridge District. Comparative Record of Traffic for the Month of December 1990).

For purposes of travel forecasting, the one-way toll is halved so that both directions on every bridge are allocated one-half of the total average toll. This is a technical necessity to counter the toll collection direction bias.

Note that free tolls for three-or-more person carpools were instituted on the Carquinez Strait bridges (Carquinez, Benicia/Martinez and Antioch) in October 1995. This is the only change in toll assumptions from the 1990 base year. The final tolls used in the 1990 model simulation are as follows:

Bridge Tolls for Travel Forecasting: 1990 Base Year

Bay Area Bridges	Drive Alone & Carpool-2	3+ Carpool	Off-Peak Tolls
Antioch	$0.48	$0.48 / $0.00	$0.48
Benicia/Martinez	$0.46	$0.46 / $0.00	$0.46
Carquinez	$0.48	$0.48 / $0.00	$0.48
Richmond/San Rafael	$0.48	$0.00	$0.48
Golden Gate	$0.47	$0.00	$0.47
SF/Oakland Bay	$0.48	$0.00	$0.48
San Mateo/Hayward	$0.48	$0.00	$0.48
Dumbarton	$0.46	$0.00	$0.46

D. Transit Fares

Year 2004 transit fares are used for all future year forecasts. This means that fares will increase with inflation, so that their real value is not eroded. This assumption is borne out by past fare trends, and reflects the ongoing need for transit operators to periodically adjust their fares to keep up with increased labor costs, maintain their local contribution to capital replacement projects, and pay for increases in the cost of fuel and other supplies.

Base and top end transit fares by Bay Area transit operator, 1970 to 1998, are shown in Table 5. Changes in Bay Area transit operator fares, 1998 to 2004, are summarized in Table 13.

Historical and projected base fares are charted in Figure 4.1 (Muni), Figure 4.2 (AC Transit), and Figure 4.3 (BART). These charts show base transit fares in current and 1990 constant dollars. These charts also

show modest real decreases in transit fares for Muni and BART over the 1995 to 2004 time period. The current dollar fares are based on a three percent per year increase in consumer price indices through the Plan forecast period.

Most operators have increased their fares in the past several years due to adverse economic conditions. Transit operator fares were revised to incorporate fares as of March 2004. Table 13 shows the changes in base fares, comparing the previous conformity determination for the RTP (2001 RTP) with the current analysis.

II. Travel Behavior Assumptions

A. Vehicle Peaking Factors

The MTC BAYCAST model system is oriented to the production of daily and AM peak period traffic assignments. In addition, the user can factor the two-hour peak period vehicle trip tables to peak hour tables using peak hour-to-peak period factors by trip purpose.

In contrast to the old MTCFCAST model system, the BAYCAST system directly simulates the number of AM peak period home-to-work vehicle trips, derived from the home-to-work departure time choice model. This is basically a "peak spreading" model that will predict fewer trips in the peak period when congestion levels increase. The standard approach of using fixed shares for all other trip purposes is still needed to augment this new departure time choice model.

Old-style (MTCFCAST) AM and PM peak hour vehicle peaking factors are shown in Table 6.1. New-style (BAYCAST) AM and PM peak period vehicle peaking factors are shown in Table 6.2. The AM peak period is defined as 7:00-9:00 AM. The PM peak period is defined as 4:00-6:00 PM.

As a part of the peak period traffic assignment calibration and validation process, a set of peak period calibration factors were developed. These calibration factors, documented in Table 7, reflect the subregional variation from the regional peaking factors shown in Table 6.2.

Data from the 1990 household travel survey show that the AM peak hour (07:30-08:30) is 58 percent of total vehicle trips occurring in the AM peak period (07:00-09:00) (930,038 vehicle trips / 1,610,546 vehicle trips, from Survey Working Paper #4, page 160, Table 2.3.7A.) So, a rough rule of thumb is to multiply any AM peak (two-hour) period traffic assignment by 0.58 to get a rough estimate of peak hour predicted traffic volumes.

B. Vehicle Occupancy Factors

In the old MTC model system, vehicle occupancy assumptions were important input assumptions to the home-based shop, home-based social/recreation and the non-home-based mode choice model system. These vehicle occupancy assumptions were used, and are still used, for dividing the vehicle trip cost between vehicle drivers and passengers.

All of the new mode choice models either split the number of person trips by vehicle occupancy level (i.e., drive alone, shared ride 2, shared ride 3+), or they split the in-vehicle person trips by vehicle driver and vehicle passenger modes. The issue in auto occupancy forecasting is to ensure that the input occupancy assumption is reasonably consistent with the forecasting output vehicle occupancy rate.

Historical vehicle occupancy rates, from MTC household travel surveys, and BAYCAST predicted vehicle rates for 2000 and 2030, are shown in Table 8.

For the home-based work, home-based shop and home-based social/recreation mode choice models, trips are split by occupancy level (DA, SR2, SR3+). For the three home-based school mode choice models and non-home-based trips, person trips are split into vehicle driver and vehicle passenger. For home-based grade school trips, vehicle driver is not an available mode. This means that the vehicle driver trip for escorting children to school is typically included as a home-based shop/other shared ride 2 or shared ride 3+ trip; the vehicle passenger (the child) is classified as a home-based grade school vehicle passenger trip.

This is complex, but reflects the nature of travel: where persons in a particular vehicle may be traveling to different activities. For example, the parent's trip purpose is to escort the child to school (home-based shop/other); the child's trip purpose is to attend school (home-based school).

Historical and projected vehicle occupancy factors are shown in Table 8. Note that these are not assumptions per se but model simulations.

C. Interregional Commuters

Assumptions about the number of interregional commuters is key in two respects: first, intraregional home-based work productions and attractions need to be adjusted to reflect in-commuting and out-commuting from and to Bay Area jobs and households; second, interregional vehicle trips are needed to augment the intraregional trips included in the standard BAYCAST travel demand models. Interregional trips were updated to reflect Census 2000 journey-to-work data and commuter sketch planning forecasts.

Interregional commuters are estimated by factoring the Census 2000 journey-to-work data file using a 46-by-46 matrix that comprises the 34 Bay Area superdistricts and the 12 Bay Area neighbor counties. These sketch planning commuter forecasts are prepared for the years 2010, 2020 and 2030 and interpolated for intermediate conformity analysis years. The factored year 2030 interregional commuter matrix is used as the basis for estimating background interregional year 2030 daily and peak period vehicle trips. This is basically a "sketch planning" effort to complement the formal models used to predict intraregional personal and intraregional commercial travel. These interregional commuter forecasts are documented in the report "Commuter Forecasts for the San Francisco Bay Area: 1990-2030 (Based on ABAG Projections 2003): Data Summary" published May 2004.

III. Demographic Assumptions

MTC used ABAG's Projections 2003 forecasts (adopted March 2003) for future year population and employment assumptions and for the geographic distributions of residents and jobs throughout the region. For use in MTC's travel demand model, MTC combines and allocates ABAG's tract-level forecasts to MTC's 1454 regional travel analysis zone system for all years.

IV. Transportation Network Assumptions

A major part of the TIP conformity analysis is the definition of highway, transit, and pedestrian/bicycle networks for various analysis years. These networks describe the supply of transportation capacity and various service characteristics that influence travel behavior. The 2006 and 2007 transportation network reflects the projects in the TIP that will be operational in 2006 and 2007. The 2015, 2025, and 2030 networks reflect approved sales tax projects in November 2004 that were shifted into the financially constrained element of Transportation 2030 Plan. Projects assumed in the transportation network for the various analysis years are listed in Appendices B of the conformity report.

Transit operator service levels have significantly changed between 2000 and 2004, due to the economic decline and the need to reduce service on some routes. The most extensive service level changes were to SamTrans and AC Transit District (Newark, Union City routes), Golden Gate and SCVTA. In the

most recent conformity analysis (2005 TIP), 2004 service levels are used in the baseline networks. The transit network used in the forecasting assumptions for this conformity analysis has not changed from the 2005 TIP conformity analysis.

V. Commercial Vehicle Methodology

The MTC BAYCAST commercial vehicle models are based on the truck trip generation models developed for Caltrans and Alameda County as part of the 1992 I-880 Intermodal Corridor Study; and truck trip distribution models documented in the 1996 report "Quick Response Freight Manual" produced by the US Department of Transportation (usable truck trip distribution models were not developed for the I-880 Intermodal Corridor Study).

These truck models are specifically limited to larger trucks of six-or-more tires. There are three sub-purposes to the MTC truck models: 1. "Small Trucks" (two-axle, six-tire vehicles); 2. "Medium Trucks" (three-axle vehicles); and 3. "Combination Trucks" (four-or-more axle vehicles).

Beginning in 2004, MTC has introduced a "very small, two-axle four-tire" commercial vehicle truck trip purpose. The "very small truck" trip model is borrowed from the Phoenix, Arizona MPO, as documented in the FHWA "Quick Response Freight Manual." Before 2004, these very small truck trips were indirectly estimated by increasing non-home-based vehicle trips.

The following sidebar summarizes the MTC BAYCAST truck trip generation and distribution models, including the very small truck trip models:

Garage-Based Truck Trip Production Models

Two-Axle Truck Productions = 0.011 * MFGEMP + 0.014 * RETEMP + 0.0105 * SEREMP + 0.046 * OTHEMP

Three-Axle Truck Productions = 0.0014 * MFGEMP + 0.00012 * RETEMP + 0.0037 * OTHEMP

Four-+-Axle Truck Productions = 0.0044 * MFGEMP + 0.0027 * SEREMP + 0.0084 * OTHEMP

Garage-Based Truck Trip Attraction Models

Two-Axle Truck Attractions = 0.0234 * TOTEMP

Three-Axle Truck Attractions = 0.0046 * TOTEMP

Four-+-Axle Truck Attractions = 0.0136 * TOTEMP

Non-Garage-Based Truck Trip Production & Attraction Models

Two-Axle Truck Productions and Attractions = 0.0324 * TOTEMP

Three-Axle Truck Productions and Attractions = 0.0039 * TOTEMP

Four-+-Axle Truck Productions and Attractions = 0.0073 * TOTEMP

Very Small Truck Trip Production & Attraction Models

Productions = 0.251 * TOTHH + 1.110 * AGREMP + 0.938 * MFGEMP +
0.938 * TRDEMP + 0.888 * RETEMP + 0.437 * SEREMP + 0.663 * OTHEMP2

Where:

MFGEMP = Manufacturing Employment

RETEMP = Retail Employment

SEREMP = Service Employment

OTHEMP = Other Employment (Wholesale Trade, Agriculture/Mining, Other)

AGREMP = Agricultural + mining Employment

TRDEMP = Wholesale Trade Employment

OTHEMP2 = Other Employment (Agriculture/Mining + Other)

TOTEMP = Total Employment

TOTHH = Total Households

Truck Trip Distribution Models: Gravity Models based on AM Peak Period Travel Time

Two-Axle Truck Trip Distribution Friction Factor: $FF_{ij} = \exp(-0.08 * TT_{ij})$

Three-Axle Truck Trip Distribution Friction Factor: $FF_{ij} = \exp(-0.1 * TT_{ij})$

Four-+-Axle Truck Trip Distribution Friction Factor: $FF_{ij} = \exp(-0.03 * TT_{ij})$

Very Small Truck Trip Distribution Friction Factor: Built off of NHB trip distribution model

In terms of mobile source emissions inventories, the MTC estimates of mobile source emissions are based on the "default" vehicle type and vehicle technology mix assumed by the California Air Resources Board (CARB) in their EMFAC/BURDEN model series. The CARB assumptions on vehicle type mix are based on the same Caltrans databases and truck counts as used by MTC in model validation, only adjusted by CARB staff to conform to the weight-based vehicle classes needed as input to the EMFAC emission factor models.

VI. Speed Post-Processing Methodology

The MTC BAYCAST models were updated and re-validated to a 2000 base year in Spring 2004. A major part of this effort was the validation of traffic assignments to observed daily traffic volumes, and observed AM peak period traffic volumes and speeds on Bay Area freeways. The model validation work is summarized in an MTC data summary: "2000 Base Year Validation of Travel Demand Models for the San Francisco Bay Area" (May 2004).

Previous conformity analyses required a speed post-processing methodology to correct for overly fast expressway and arterial speeds. This speed post-processing methodology has been eliminated in the current set of forecasts, and replaced with a consistent set of speeds used in all model components. What was formerly the "post-processing" methodology is now the "main processing" methodology. This means that reduced free-flow arterial and expressway speeds that were only incorporated in a post-processing traffic assignment stage are now used throughout the MTC model system: as inputs to the trip distribution, mode choice, as well as traffic assignment stages.

The standard set of speed-flow models used in the MTC model system includes an MTC variation on the "BPR" curve, and application of the "Akçelik" speed-flow curve documented in previous MTC research. The "MTC Breakdown Curve" is used for freeways and freeway-to-freeway segments; the "Akçelik Curve" is used for expressways, collectors, freeway ramps, major arterials and metered ramps.

MTC assumptions of per lane capacity and free-flow speed are "lookup" tables based on facility type (freeway, major arterial, etc.) and area type (rural, suburban, etc.) Area types are based on "area density," a combined measure of population and employment density. Current and former sets of free-flow speeds are shown in Table 11.

The following box summarizes the MTC standard and post-processing set of speed-flow models.

MTC Standard & Post-Processing Set of Speed-Flow Models

MTC Breakdown Curve (Freeways & Freeway-to-Freeway Facilities)

$t = t_o * (1 + 0.20 * ((x)/0.75)^6)$

Akçelik Curve (All Other Facilities)

$t = t_o + \{0.25 * T * [(x-1) + ((x-1)^2 + (16 * Ja * L^2/T^2))^0.5]\}$

where:
t = average travel time per unit distance (hours/mile)
t_o = free-flow travel time per unit distance (hours/mile)
T = flow period, i.e., the time interval in hours during which an average arrival (demand) flow rate, v, persists
Q = capacity
x = the degree of saturation, i.e., v/Q
Ja = the delay parameter (Expressway = 0.2, Collector=1.2, Freeway Ramp=0.17, Major Arterial=0.4, Metered Ramp=0.2)
Ja = the delay parameter (Post-Processing = calculated for each facility type, area type combination, where: Ja = (Tc – To)^2 / L^2 and "Tc" is the critical speed at V/C ratio of 1.0)
L = Link length (miles)

VII. Adjustment of Regional VMT and Trips Methodology

Regional VMT and engine starts (needed for emission calculations) are forecasted using a combination of output from MTC's travel demand forecasting model and base year (1999) VMT information provided by the California Air Resources Board (ARB). The ARB base year VMT comes from the State Bureau of Automotive Repair's (BAR) biennial inspection/maintenance odometer records for registered Bay Area vehicles. MTC then "grows" this VMT consistent with the growth in VMT projected in MTC's regional travel model forecasts.

The BAR-based VMT will over-estimate Bay Area VMT by including Bay Area-registered vehicle travel occurring outside the nine-county region. The BAR-based VMT method will also not include Bay Area VMT by non-resident vehicular travel occurring inside the nine-county region. ARB considers that these anomalies offset each other, and that the resulting regional VMT level is a conservatively high value. In comparison, MTC estimates 143,495 thousand VMT per weekday in year 2000. The 1999 ARB estimates, based on BAR inspection/maintenance data, show 157,359 thousand VMT per weekday. For conformity purposes, MTC agreed to follow ARB's protocol for estimating VMT. Using MTC growth estimation data, the 1999 ARB VMT estimate was adjusted to establish a new 2000 ARB baseline VMT estimate for mobile source emission inventory calculations in the Bay Area. MTC calculated that the ARB estimated VMT in year 2000 is 165,894. For comparative purposes, below is a table showing the differences in MTC and ARB's VMT estimates from the 2001 RTP and 2005 RTP.

Base Year 2000, Average Weekday Daily VMT

	2001 RTP	**2005 RTP**
ARB	159,642*	165,894
MTC	134, 256	143,495
% Difference	-16%	-14%

*Source: San Francisco Bay Area-EMFAC2000

MTC used the 2000 ARB baseline VMT of 165,894 to develop VMT estimates for the remaining analysis years – 2006, 2007, 2015, 2025, 2030. Annual compounded growth rates were then updated and applied to generate regional VMT totals for this conformity analysis.

Regional engine starts (which generate event-specific emissions) are based on ARB's estimate of approximately 6.72 to 6.75 engine starts per vehicle per day. This 6.75 engine starts per day value is based on a small-scale survey of instrumented Sacramento-area vehicles conducted by ARB. This contrasts to other Bay Area, California and National surveys that show trip rates ranging from 2.5 to 3.5 vehicle trips per vehicle per day. For more discussion on this engine starts per vehicle issue, refer to the November 24, 1999 letter from the MTC to the California Air Resources Board. ARB and MTC have also agreed to continue working on this issue.

VIII. Distribution of VMT by Speed Methodology

An important input to ARB's EMFAC 2002, V2.2 mobile source emissions inventory model are county-level files of the share of vehicle miles travel by speed cohort, by time of day. Data is needed for 13 speed cohorts and 6 time-of-day periods (0000-0600, 0600-0900, 0900-1200, 1200-1500, 1500-1800 and 1800-2400). Regional totals of VMT by the 13 speed cohorts for 2000, 2015, and 2030 are summarized and charted in Table 12. These VMT values include intra-zonal VMT and terminal distance VMT.

It is important to note that these speeds are extracted from the post-processed highway assignments and represent average link speeds. They do not represent the range of actual traffic speeds that may be represented in average link speeds. For example, a 25 mile per hour average link speed on a freeway segment is very congested and represents "stop-and-go" conditions with speeds ranging from 0 to 65 miles

per hour. The same 25 mile per hour average link speed on an arterial segment may represent a fairly "steady state" speed on a signal coordinated arterial system.

The first step in preparing the VMT-by-speed share file is the preparation of daily traffic assignments. The daily vehicle trips output from the last mode choice model iteration are split into AM-plus-PM peak period vehicle trips, and off-peak period vehicle trips. The peak period vehicle trips, representing the six peak hours, are assigned "all-or-nothing" to the MTC regional highway network using the post-processed congested speeds. The off-peak period vehicle trips, representing the 18 off-peak hours, are also assigned "all-or-nothing" to the same MTC regional highway network using free-flow speeds.

The "loaded" highway network with AM peak period and daily traffic assignment results are then exported into text files and subsequently imported into SAS (Statistical Analysis System) for further post-processing. Daily assignment volumes are then multiplied by link distance to yield vehicle miles of travel (VMT) by link, which are in turn summarized at the county-of-occurrence by speed-cohort level.

There are three components of regional VMT: interzonal VMT that is assigned to highway networks; intra-zonal VMT that is not assigned to highway networks; and terminal distance VMT that is not assigned to highway networks.

Intra-zonal vehicle trips are not assigned to highway networks. The VMT associated with intra-zonal vehicle trips is derived by exporting the intra-zonal vehicle trips and intra-zonal door-to-door distance data into a format compatible with SAS, and for merging with the daily traffic assignment SAS files. Intra-zonal VMT is approximately 7.2 to 7.5 percent of regional VMT in 2000 and in future years. SAS routines are then used to apply the "terminal distance" vehicle miles of travel to the inter-zonal and intra-zonal VMT. "Terminal distance" VMT is defined as the amount of travel from the "average household" or "average activity location" in a travel analysis zone to the nearest highway link represented in the regional highway networks.

These speed distributions were then applied to passenger cars (PC), light-duty trucks (T1, T2), medium-duty trucks (T3), and motorcycles (mcy) in EMFAC 2002. EMFAC2002 model defaults were used on all other vehicle types and times of day.

Table 1
Peak Parking Cost Assumptions by Bay Area Regional Travel Analysis Zones
Peak Period Parking Costs in 1990 cents per hour

zone	City	Neighborhood	2000	2006	2007	2015	2025	2030	Annual Percent Change, 2000-2030
1	San Francisco	Financial District	160	161	162	176	172	176	0.3%
2	San Francisco	Financial District	160	160	162	176	184	187	0.5%
3	San Francisco	Union Square	160	159	159	176	184	188	0.5%
4	San Francisco	Financial District	140	141	142	153	152	155	0.3%
5	San Francisco	Union Square	140	139	140	162	171	175	0.7%
6	San Francisco	Tenderloin	110	129	130	138	141	142	0.9%
7	San Francisco	Tenderloin	150	169	172	202	209	213	1.2%
8	San Francisco	Tenderloin	85	87	88	99	104	107	0.8%
9	San Francisco	Civic Center	70	68	69	77	81	84	0.6%
10	San Francisco	South of Market	65	74	76	84	87	88	1.0%
11	San Francisco	South of Market	85	97	98	111	112	114	1.0%
12	San Francisco	South of Market	130	133	135	153	169	178	1.1%
13	San Francisco	South of Market	130	133	134	149	164	173	1.0%
14	San Francisco	South of Market	145	148	149	162	178	185	0.8%
15	San Francisco	South of Market	145	148	150	164	179	187	0.9%
16	San Francisco	South of Mission	120	126	129	146	150	156	0.9%
17	San Francisco	South of Mission	80	83	85	96	101	106	0.9%
18	San Francisco	South of Mission	70	72	73	82	87	90	0.8%
19	San Francisco	South of Mission	60	62	64	70	74	78	0.9%
20	San Francisco	South of Mission	60	60	62	69	70	73	0.7%
21	San Francisco	South of Mission	90	91	93	106	110	112	0.7%
22	San Francisco	Embarcadero	140	148	151	163	166	168	0.6%
23	San Francisco	East of Telegraph Hill	120	126	128	135	135	137	0.4%
24	San Francisco	Jackson Square	170	172	174	182	187	189	0.4%
25	San Francisco	Chinatown	170	139	140	146	148	149	-0.4%
26	San Francisco	Chinatown	170	173	174	182	185	186	0.3%
27	San Francisco	Chinatown	170	143	144	150	152	153	-0.4%
28	San Francisco	Nob Hill	110	92	92	98	100	100	-0.3%
29	San Francisco	Nob Hill	110	110	110	118	120	121	0.3%
30	San Francisco	Civic Center	70	71	71	83	94	101	1.2%
31	San Francisco	Polk Gulch	70	73	74	85	94	98	1.1%
32	San Francisco	Polk Gulch	70	70	71	75	79	80	0.4%
33	San Francisco	Polk Gulch	70	71	72	75	72	74	0.2%
34	San Francisco	Polk Gulch	60	46	46	49	54	56	-0.2%
35	San Francisco	Russian Hill	80	88	91	103	104	104	0.9%
36	San Francisco	North Beach	125	127	128	133	127	131	0.2%
37	San Francisco	North Beach	125	126	127	134	139	142	0.4%
38	San Francisco	North Beach	80	81	81	86	93	95	0.6%
39	San Francisco	North Beach	80	81	82	86	100	110	1.1%
40	San Francisco	Fisherman's Wharf	80	86	88	94	98	100	0.7%
41	San Francisco	Fisherman's Wharf	80	82	82	88	88	88	0.3%
44	San Francisco	Western Addition	55	50	51	55	54	53	-0.1%

Table 1
Peak Parking Cost Assumptions by Bay Area Regional Travel Analysis Zones
Peak Period Parking Costs in 1990 cents per hour

zone	City	Neighborhood	2000	2006	2007	2015	2025	2030	Annual Percent Change, 2000-2030
45	San Francisco	Western Addition	0	0	55	0	0	0	NA
46	San Francisco	Western Addition	55	54	49	60	49	51	-0.3%
47	San Francisco	Western Addition	0	0	25	0	0	0	NA
48	San Francisco	Western Addition	0	0	49	0	0	0	NA
49	San Francisco	Western Addition	0	0	55	0	0	0	NA
72	San Francisco	Western Addition	0	0	55	0	0	0	NA
73	San Francisco	Western Addition	50	49	53	54	60	58	0.5%
74	San Francisco	Western Addition	25	24	69	27	27	27	0.3%
75	San Francisco	Western Addition	50	49	45	53	48	50	0.0%
76	San Francisco	Western Addition	55	55	34	59	55	58	0.2%
77	San Francisco	Western Addition	55	54	35	60	62	62	0.4%
78	San Francisco	Western Addition	55	53	36	57	87	112	2.4%
79	San Francisco	Hayes Valley	70	69	54	73	75	75	0.2%
80	San Francisco	Hayes Valley	55	45	37	49	60	69	0.8%
81	San Francisco	Buena Vista	35	34	35	37	40	42	0.6%
82	San Francisco	Buena Vista	35	35	35	37	36	36	0.1%
84	San Francisco	Buena Vista	35	35	61	39	43	36	0.1%
85	San Francisco	Buena Vista	55	54	9	58	65	70	0.8%
94	San Francisco	Castro	0	0	17	0	0	0	NA
99	San Francisco	Mission District	0	0	17	0	0	0	NA
100	San Francisco	Mission District	0	0	17	0	0	0	NA
101	San Francisco	Mission District	0	0	20	0	0	0	NA
102	San Francisco	Mission District	0	0	44	0	0	0	NA
103	San Francisco	Mission District	0	0	35	0	0	0	NA
104	San Francisco	Mission District	0	0	35	0	0	0	NA
105	San Francisco	Mission District	35	37	47	42	42	42	0.6%
106	San Francisco	Mission District	35	35	31	39	40	41	0.5%
107	San Francisco	Mission District	35	35	57	38	40	40	0.4%
109	San Francisco	Mission District	50	60	32	70	77	82	1.7%
257	San Mateo	Downtown	0	0	32	0	0	0	NA
258	San Mateo	Downtown	0	0	57	0	0	0	NA
259	San Mateo	Downtown	0	0	57	0	0	0	NA
260	San Mateo	Downtown	0	0	58	0	0	0	NA
314	Redwood City	Downtown	0	0	57	0	0	0	NA
315	Redwood City	Downtown	0	0	31	0	0	0	NA
316	Redwood City	Downtown	0	0	66	0	0	0	NA
326	Redwood City	Downtown	0	0	101	0	0	0	NA
347	Palo Alto	Downtown	9	9	97	10	10	10	0.4%
354	Palo Alto	Downtown	17	17	99	18	18	18	0.2%
355	Palo Alto	Downtown	17	17	99	18	18	18	0.2%
356	Palo Alto	Downtown	17	17	97	18	16	16	-0.2%
546	San Jose	Downtown	18	20	51	23	25	26	1.2%

Table 1
Peak Parking Cost Assumptions by Bay Area Regional Travel Analysis Zones
Peak Period Parking Costs in 1990 cents per hour

zone	City	Neighborhood	2000	2006	2007	2015	2025	2030	Annual Percent Change, 2000-2030
549	San Jose	Downtown	43	43	51	57	83	104	3.0%
556	San Jose	Downtown	33	34		40	44	47	1.2%
557	San Jose	Downtown	33	34		40	44	48	1.3%
558	San Jose	Downtown	45	46		55	61	68	1.4%
560	San Jose	Downtown	29	30		41	58	72	3.1%
945	Oakland	Downtown	55	57		62	64	66	0.6%
946	Oakland	Downtown	30	32		34	35	36	0.6%
967	Oakland	Downtown	30	31		34	35	36	0.6%
968	Oakland	Downtown	55	57		62	64	66	0.6%
969	Oakland	Downtown	55	56		60	60	60	0.3%
970	Oakland	Downtown	55	57		67	72	75	1.0%
971	Oakland	Downtown	55	57		62	67	71	0.9%
980	Oakland	Downtown	30	30		33	35	36	0.6%
981	Oakland	Downtown	55	65		72	79	82	1.3%
1007	Berkeley	Downtown	96	101		101	104	105	0.3%
1008	Berkeley	Downtown	96	97		98	99	100	0.1%
1018	Berkeley	Downtown	96	99		101	103	104	0.3%
1019	Berkeley	Downtown	96	98		101	102	102	0.2%
1020	Berkeley	Downtown	96	97		98	100	100	0.1%
1021	Berkeley	Downtown	50	51		51	52	52	0.1%
1027	Berkeley	Downtown	50	50		52	53	54	0.3%

Note: Zones are from MTC's 1,454 regional travel analysis zone system.

Table 2
Off-Peak Parking Cost Assumptions by Bay Area Regional Travel Analysis Zones
Off-Peak Period Parking Costs in 1990 cents per hour

zone	City	Neighborhood	2000	2006	2007	2015	2025	2030	Annual Percent Change, 2000-2030
1	San Francisco	Financial District	525	528	532	577	566	577	0.3%
2	San Francisco	Financial District	525	526	530	577	603	614	0.5%
3	San Francisco	Union Square	525	521	523	577	605	618	0.5%
4	San Francisco	Financial District	230	232	233	251	250	255	0.3%
5	San Francisco	Union Square	230	229	231	266	280	288	0.8%
6	San Francisco	Tenderloin	400	469	472	503	511	515	0.8%
7	San Francisco	Tenderloin	440	495	505	592	612	625	1.2%
8	San Francisco	Tenderloin	325	333	336	380	397	409	0.8%
9	San Francisco	Civic Center	115	112	113	126	133	138	0.6%
10	San Francisco	South of Market	200	229	233	260	267	272	1.0%
11	San Francisco	South of Market	190	216	219	249	250	255	1.0%
12	San Francisco	South of Market	570	585	593	671	739	781	1.1%
13	San Francisco	South of Market	570	582	589	654	720	758	1.0%
14	San Francisco	South of Market	600	612	619	672	735	767	0.8%
15	San Francisco	South of Market	600	613	620	677	741	775	0.9%
16	San Francisco	South of Mission	390	411	420	475	487	507	0.9%
17	San Francisco	South of Mission	350	363	371	419	444	463	0.9%
18	San Francisco	South of Mission	200	206	210	233	248	256	0.8%
19	San Francisco	South of Mission	165	171	175	191	204	213	0.9%
20	San Francisco	South of Mission	165	166	169	190	194	201	0.7%
21	San Francisco	South of Mission	260	263	270	307	319	324	0.7%
22	San Francisco	Embarcadero	385	408	414	447	456	463	0.6%
23	San Francisco	East of Telegraph Hill	300	315	320	338	337	343	0.4%
24	San Francisco	Jackson Square	550	558	561	590	605	613	0.4%
25	San Francisco	Chinatown	250	204	206	215	218	219	-0.4%
26	San Francisco	Chinatown	250	255	256	268	272	274	0.3%
27	San Francisco	Chinatown	250	210	212	221	224	225	-0.4%
28	San Francisco	Nob Hill	400	334	336	357	363	365	-0.3%
29	San Francisco	Nob Hill	400	399	402	429	436	439	0.3%
30	San Francisco	Civic Center	95	96	97	113	128	137	1.2%
31	San Francisco	Polk Gulch	95	99	100	115	127	133	1.1%
32	San Francisco	Polk Gulch	95	96	96	102	107	109	0.5%
33	San Francisco	Polk Gulch	75	76	77	80	77	79	0.2%
34	San Francisco	Polk Gulch	75	57	58	61	68	70	-0.2%
35	San Francisco	Russian Hill	80	88	91	103	104	104	0.9%
36	San Francisco	North Beach	175	178	180	186	178	184	0.2%
37	San Francisco	North Beach	175	176	177	188	195	198	0.4%
38	San Francisco	North Beach	330	333	335	356	383	392	0.6%
39	San Francisco	North Beach	330	335	338	356	413	453	1.1%
40	San Francisco	Fisherman's Wharf	260	280	285	306	317	325	0.7%
41	San Francisco	Fisherman's Wharf	400	408	412	439	441	440	0.3%
44	San Francisco	Western Addition	75	69	69	75	73	72	-0.1%

Table 2
Off-Peak Parking Cost Assumptions by Bay Area Regional Travel Analysis Zones
Off-Peak Period Parking Costs in 1990 cents per hour

zone	City	Neighborhood	2000	2006	2007	2015	2025	2030	Annual Percent Change, 2000-2030
45	San Francisco	Western Addition	75	74	74	81	88	93	0.7%
46	San Francisco	Western Addition	75	74	89	82	67	69	-0.3%
47	San Francisco	Western Addition	90	88	85	99	91	97	0.2%
48	San Francisco	Western Addition	90	88	89	99	97	122	1.0%
49	San Francisco	Western Addition	90	88	90	99	93	108	0.6%
72	San Francisco	Western Addition	81	79	90	86	95	94	0.5%
73	San Francisco	Western Addition	90	88	87	96	108	105	0.5%
74	San Francisco	Western Addition	86	84	89	92	92	93	0.3%
75	San Francisco	Western Addition	90	88	69	95	86	90	0.0%
76	San Francisco	Western Addition	90	89	49	96	90	94	0.1%
77	San Francisco	Western Addition	90	88	50	98	102	102	0.4%
78	San Francisco	Western Addition	90	86	51	93	143	183	2.4%
79	San Francisco	Hayes Valley	90	88	84	94	97	96	0.2%
80	San Francisco	Hayes Valley	85	69	53	75	93	107	0.8%
81	San Francisco	Buena Vista	50	48	50	53	57	59	0.6%
82	San Francisco	Buena Vista	50	49	50	53	51	51	0.1%
84	San Francisco	Buena Vista	50	50	122	55	61	52	0.1%
85	San Francisco	Buena Vista	85	83	31	90	101	109	0.8%
94	San Francisco	Castro	45	43	61	49	40	43	-0.2%
99	San Francisco	Mission District	50	61	61	69	57	60	0.6%
100	San Francisco	Mission District	50	49	62	55	59	60	0.6%
101	San Francisco	Mission District	50	46	127	52	51	53	0.2%
102	San Francisco	Mission District	50	49	74	55	62	68	1.0%
103	San Francisco	Mission District	45	43	97	50	55	55	0.7%
104	San Francisco	Mission District	45	43	97	57	56	58	0.8%
105	San Francisco	Mission District	50	53	204	60	61	60	0.6%
106	San Francisco	Mission District	50	50	97	55	57	58	0.5%
107	San Francisco	Mission District	50	49	125	55	57	58	0.5%
109	San Francisco	Mission District	100	119	79	141	153	164	1.7%
257	San Mateo	Downtown	20	20	79	24	26	27	1.0%
258	San Mateo	Downtown	20	21	125	24	27	29	1.2%
259	San Mateo	Downtown	20	20	124	23	25	25	0.7%
260	San Mateo	Downtown	20	20	127	23	27	29	1.2%
314	Redwood City	Downtown	9	9	124	10	10	10	0.4%
315	Redwood City	Downtown	9	9	122	10	11	11	0.7%
316	Redwood City	Downtown	9	10	144	10	12	12	1.0%
326	Redwood City	Downtown	9	9	34	10	10	10	0.4%
347	Palo Alto	Downtown	31	31	32	33	34	34	0.3%
354	Palo Alto	Downtown	61	60	61	63	64	64	0.2%
355	Palo Alto	Downtown	61	61	27	64	64	65	0.2%
356	Palo Alto	Downtown	61	62	26	65	59	59	-0.1%
546	San Jose	Downtown	113	123	32	143	156	164	1.2%

Table 2
Off-Peak Parking Cost Assumptions by Bay Area Regional Travel Analysis Zones
Off-Peak Period Parking Costs in 1990 cents per hour

zone	City	Neighborhood	2000	2006	2007	2015	2025	2030	Annual Percent Change, 2000-2030
549	San Jose	Downtown	73	73	32	96	142	176	3.0%
556	San Jose	Downtown	92	95		111	123	132	1.2%
557	San Jose	Downtown	92	95		111	124	133	1.2%
558	San Jose	Downtown	194	199		236	264	293	1.4%
560	San Jose	Downtown	92	95		129	185	230	3.1%
945	Oakland	Downtown	120	124		136	140	145	0.6%
946	Oakland	Downtown	75	79		84	88	90	0.6%
967	Oakland	Downtown	75	78		84	88	89	0.6%
968	Oakland	Downtown	120	124		136	139	144	0.6%
969	Oakland	Downtown	120	123		132	131	132	0.3%
970	Oakland	Downtown	120	125		145	157	163	1.0%
971	Oakland	Downtown	120	123		134	146	155	0.9%
980	Oakland	Downtown	120	121		131	141	145	0.6%
981	Oakland	Downtown	120	143		157	172	179	1.3%
1007	Berkeley	Downtown	32	34		34	35	35	0.3%
1008	Berkeley	Downtown	32	32		33	33	33	0.1%
1018	Berkeley	Downtown	59	61		62	63	64	0.3%
1019	Berkeley	Downtown	26	27		27	28	28	0.2%
1020	Berkeley	Downtown	26	26		27	27	27	0.1%
1021	Berkeley	Downtown	32	32		33	33	33	0.1%
1027	Berkeley	Downtown	32	32		33	34	34	0.2%

Note: Zones are from MTC's 1,454 regional travel analysis zone system.

Table 3
Historical and Projected Auto Operating Costs, 1990 - 2030

Year	Retail Gas Price (Current $)	CPI	Gas Price (1990$)	Fuel Correction Factor	Fuel Economy (MPG)	Gasoline Operating Cost (¢/mi) (1990$)	Non-Gas Operating Cost (¢/mi) (1990$)	Total Auto Operating Cost (¢/mi) (1990$)
1990	$1.241	406.0	$1.241	1.000	21.9	5.67 ¢/mi	3.05 ¢/mi	8.72 ¢/mi
1991	$1.197	423.9	$1.146	1.000	21.9	5.23 ¢/mi	3.43 ¢/mi	8.66 ¢/mi
1992	$1.302	438.1	$1.207	1.000	21.9	5.51 ¢/mi	3.57 ¢/mi	9.08 ¢/mi
1993	$1.299	449.9	$1.172	1.000	21.9	5.35 ¢/mi	3.70 ¢/mi	9.05 ¢/mi
1994	$1.275	457.1	$1.132	1.000	21.9	5.17 ¢/mi	3.45 ¢/mi	8.62 ¢/mi
1995	$1.286	466.0	$1.120	1.000	21.9	5.12 ¢/mi	3.57 ¢/mi	8.69 ¢/mi
1996	$1.434	482.3	$1.207	1.000	21.9	5.51 ¢/mi	3.47 ¢/mi	8.98 ¢/mi
1997	$1.448	493.0	$1.192	1.000	21.9	5.45 ¢/mi	3.63 ¢/mi	9.08 ¢/mi
1998	$1.304	508.9	$1.040	1.000	21.9	4.75 ¢/mi	3.17 ¢/mi	7.92 ¢/mi
1999	$1.514	530.2	$1.159	1.000	21.9	5.29 ¢/mi	3.53 ¢/mi	8.82 ¢/mi
2000	$1.832	553.9	$1.343	1.000	21.9	6.13 ¢/mi	4.09 ¢/mi	10.22 ¢/mi
2001	$1.800	583.9	$1.252	1.000	21.9	5.71 ¢/mi	3.81 ¢/mi	9.52 ¢/mi
2002	$1.590	593.2	$1.088	1.000	21.9	4.97 ¢/mi	3.31 ¢/mi	8.28 ¢/mi
2003	$1.797	603.9	$1.208	1.000	21.9	5.52 ¢/mi	3.68 ¢/mi	9.19 ¢/mi
2004	$2.000	622.0	$1.305	1.000	21.9	5.96 ¢/mi	3.97 ¢/mi	9.93 ¢/mi
2005	$2.100	640.7	$1.331	1.000	21.9	6.08 ¢/mi	4.05 ¢/mi	10.13 ¢/mi
2006	$2.183	659.9	$1.343	1.000	21.9	6.13 ¢/mi	4.09 ¢/mi	10.22 ¢/mi
2007	$2.183	659.9	$1.343	1.000	21.9	6.13 ¢/mi	4.09 ¢/mi	10.22 ¢/mi
2010	$2.457	742.7	$1.343	1.000	21.9	6.13 ¢/mi	4.09 ¢/mi	10.22 ¢/mi
2015	$2.848	861.0	$1.343	1.000	21.9	6.13 ¢/mi	4.09 ¢/mi	10.22 ¢/mi
2020	$3.302	998.2	$1.343	1.000	21.9	6.13 ¢/mi	4.09 ¢/mi	10.22 ¢/mi
2025	$3.828	1157.1	$1.343	1.000	21.9	6.13 ¢/mi	4.09 ¢/mi	10.22 ¢/mi
2030	$4.437	1341.4	$1.343	1.000	21.9	6.13 ¢/mi	4.09 ¢/mi	10.22 ¢/mi

Inflation Assumption (2003 - 2030) = *3.0%*

Notes:

1. Future gas price of $1.343 (1990 dollars) is equivalent to $1.83/gallon in 2000 current dollars.
2. Future gas price based on California Energy Commission and US Dept. of Energy Energy Information Administration estimates. These range from $1.09/gallon (CEC) to approximately $1.38/gallon (EIA). EIA estimates range from $1.265 to $1.380 per gallon. CEC gas price estimates are based on base year (2000) gas price of $1.50/gallon in 2000 dollars, and future gas prices remaining at year 2000 levels (e.g., $1.50/gallon for future years.)
3. Future non-gasoline operating cost based on assumption that it is 60% of auto gasoline cost.
4. No change in overall fleet fuel economy is assumed. This respects the no change in fuel economy trend shown by the US Energy Information Agency (EIA) in their "Household Vehicles Energy Consumption Report" (September 1997).
5. Future year estimates prepared 3/8/2004

Figure 1
Auto Operating Costs (Cents/Mile)
Gasoline and Non-Gasoline Operating Costs, 1990-2030

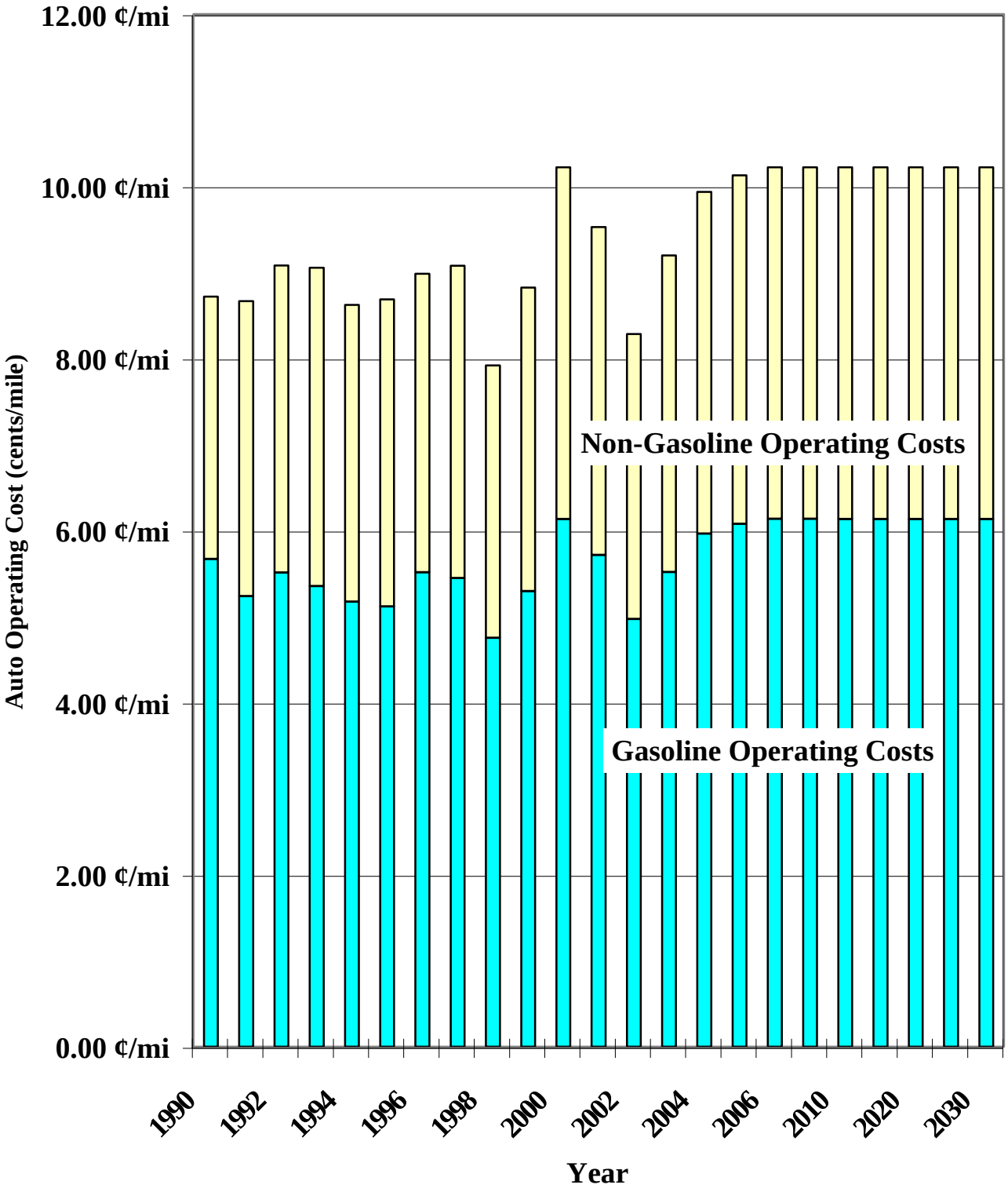

Figure 2
San Francisco Bay Area Gasoline Prices - 1990-2030
Current Dollars and 1990 Constant Dollars

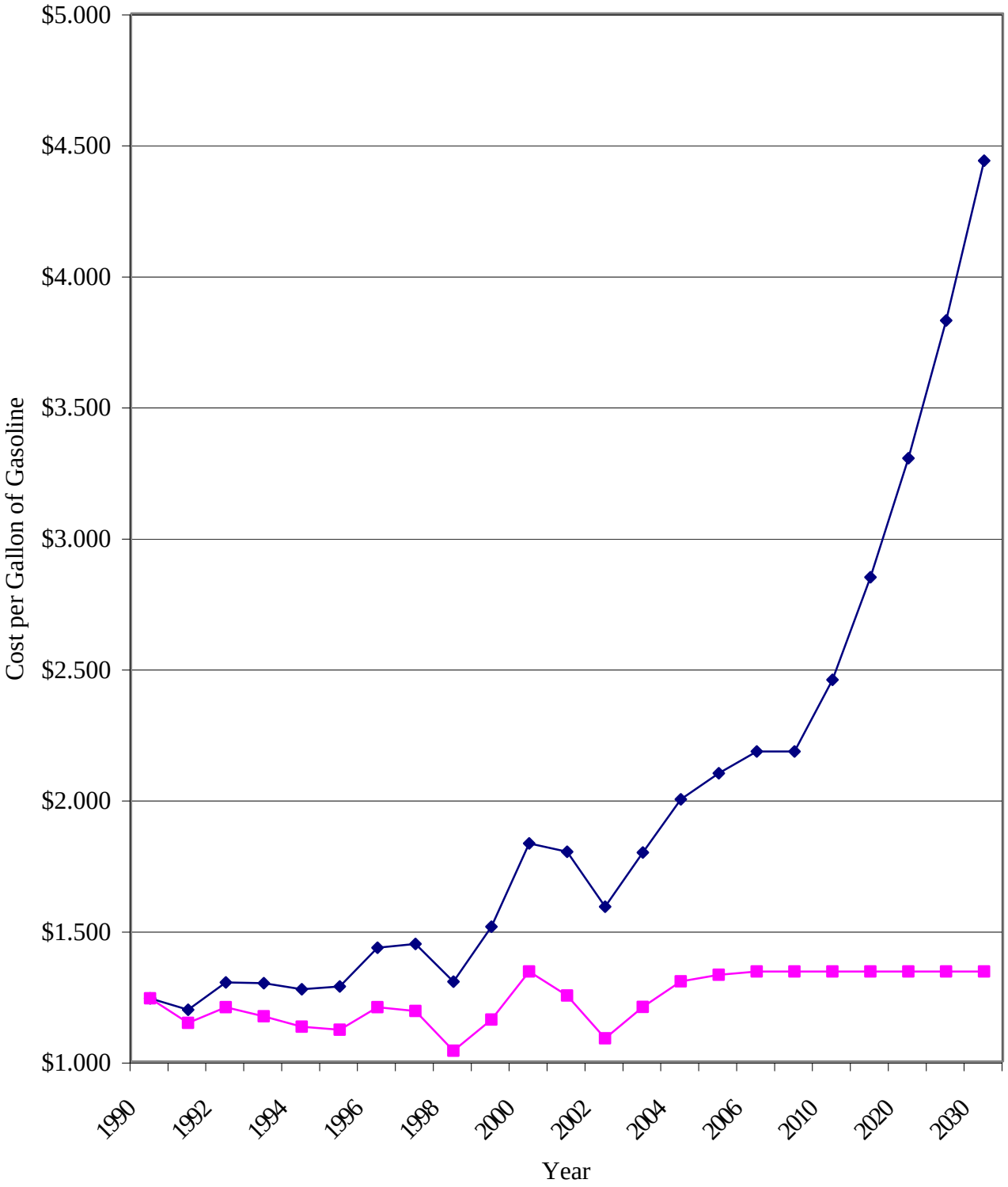

Table 4
Impact of Inflation on Bay Bridge Tolls, 1975 - 2030

Year	CPI-U All Items	San Francisco/Oakland Bay Bridge Toll (current $)	(1990 $)
1975	159.1	50¢	127.6¢
1976	168.0	50¢	120.8¢
1977	180.8	75¢	168.4¢
1978	197.8	75¢	153.9¢
1979	214.6	75¢	141.9¢
1980	247.3	75¢	123.1¢
1981	279.0	75¢	109.1¢
1982	300.0	75¢	101.5¢
1983	302.5	75¢	100.7¢
1984	319.8	75¢	95.2¢
1985	333.1	75¢	91.4¢
1986	343.2	75¢	88.7¢
1987	354.7	75¢	85.8¢
1988	370.4	75¢	82.2¢
1989	388.5	100¢	104.5¢
1990	406.0	100¢	100.0¢
1991	423.9	100¢	95.8¢
1992	438.1	100¢	92.7¢
1993	449.9	100¢	90.2¢
1994	457.1	100¢	88.8¢
1995	466.0	100¢	87.1¢
1996	482.3	100¢	84.2¢
1997	493.0	100¢	82.4¢
1998	508.8	200¢	159.6¢
1999	530.2	200¢	153.1¢
2000	553.9	200¢	146.6¢
2001	583.9	200¢	139.1¢
2002	593.2	200¢	136.9¢
2003	603.9	300¢	201.7¢
2004	622.0*	300¢	195.8¢
2005	640.7*	300¢	190.1¢
2006	659.9*	300¢	184.6¢
2007	679.7*	300¢	179.2¢
2008	700.1*	300¢	174.0¢
2009	721.1*	300¢	168.9¢
2010	742.7*	300¢	164.0¢
2011	765.0*	300¢	159.2¢
2012	788.0*	300¢	154.6¢
2013	811.6*	300¢	150.1¢
2014	835.9*	300¢	145.7¢
2015	861.0*	300¢	141.5¢
2016	886.8*	300¢	137.3¢
2017	913.5*	300¢	133.3¢
2018	940.9*	300¢	129.5¢
2019	969.1*	300¢	125.7¢
2020	998.2*	300¢	122.0¢
2021	1028.1*	300¢	118.5¢
2022	1058.9*	300¢	115.0¢
2023	1090.7*	300¢	111.7¢
2024	1123.4*	300¢	108.4¢
2025	1157.1*	300¢	105.3¢
2026	1191.8*	300¢	102.2¢
2027	1227.6*	300¢	99.2¢
2028	1264.4*	300¢	96.3¢
2029	1302.4*	300¢	93.5¢
2030	1341.4*	300¢	90.8¢

* Assumes 3% per year annual inflation

Figure 3
Bay Bridge Tolls
1990 and Current Dollars

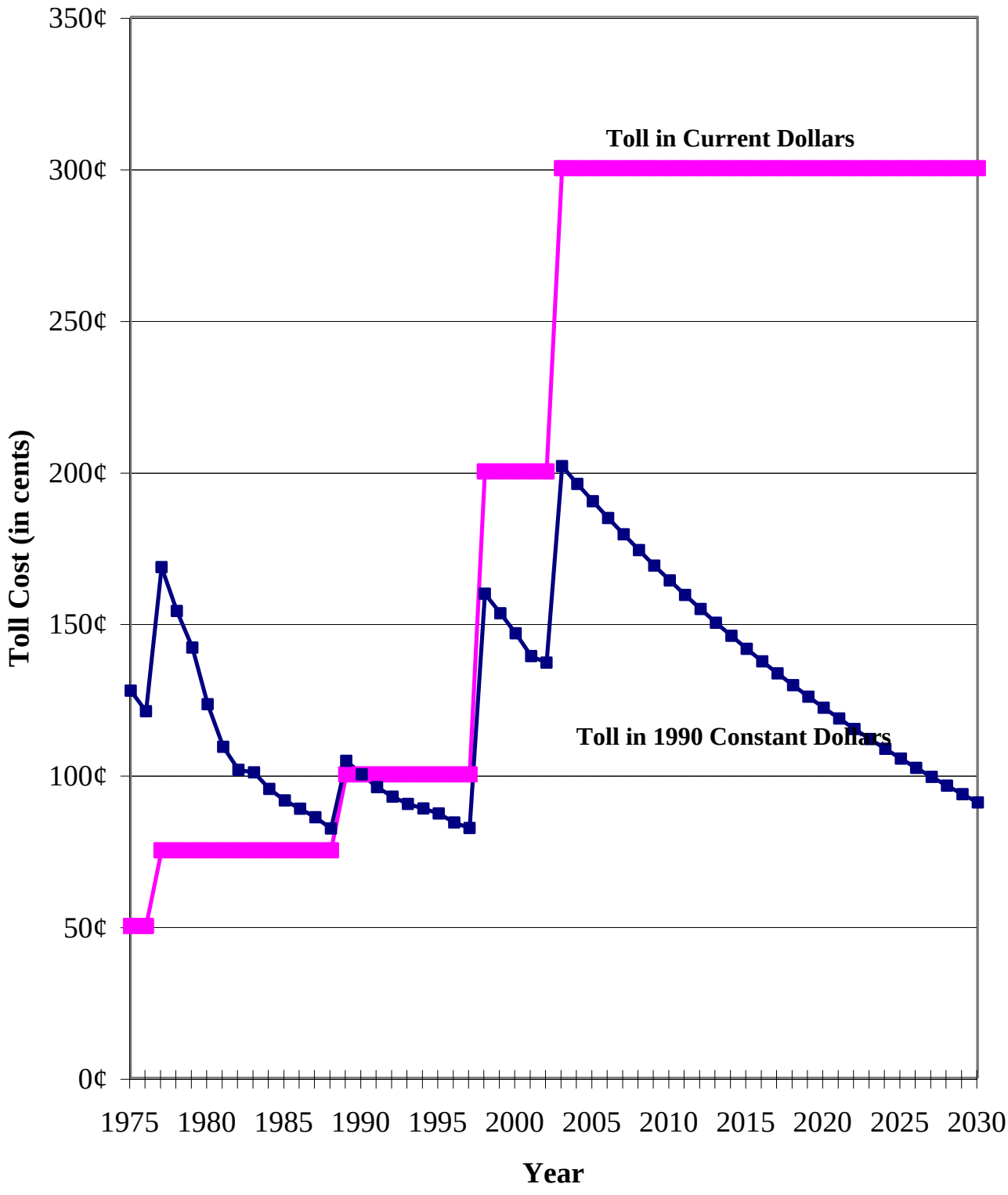

Table 5
History of Transit Fares in Bay Area, 1970-1998

	MUNI	AC Transit	BART Trains	BART Bus	SCVTA	SamTrans	GGBHTD Bus	GGBHTD Ferry	CalTrain	CCCTA	Vallejo Bus	Vallejo Ferry	AMTRAK	Napa Valley
1970														
Base	$ 0.25	$ 0.25				n.a.	n.a.	$ 0.50	$ 0.33			n.a.		
High		$ 0.80							$ 0.67					
1975														
Base	$ 0.25	$ 0.30	$ 0.25	$ 0.25	$ 0.25	n.a.	$ 0.35	$ 0.50	$ 0.35	n.a.	$ 0.25	n.a.		
High		$ 1.40	$ 1.45	$ 0.50			$ 1.50		$ 0.71					
1980														
Base	$ 0.50	$ 0.50	$ 0.35		$ 0.35	$ 0.25	$ 0.35	$ 1.50	$ 0.71	$ 0.25	$ 0.35	n.a.		
High		$ 1.50	$ 1.50		$ 0.75	$ 1.25	$ 2.50	$ 2.00	$ 1.47	$ 0.50				
1985														
Base	$ 0.60	$ 0.60	$ 0.60	$ 0.60	$ 0.60	$ 0.35	$ 1.00	$ 2.10	$ 0.86	$ 0.60		n.a.		
High		$ 1.75	$ 2.15	$ 0.90	$ 1.00	$ 1.35	$ 3.30	$ 2.50	$ 1.80					
1990														
Base	$ 0.85	$ 1.00	$ 0.80	$ 0.75	$ 0.75	$ 0.50			$ 0.86	$ 0.60				n.a.
High	$ 2.00	$ 2.00	$ 3.00	$ 1.15	$ 1.00	$ 1.95			$ 1.92					
1995														
Base	$ 1.00	$ 1.25	$ 0.90		$ 1.10	$ 1.00	$ 1.25		$ 0.73	$ 1.00	$ 1.00	$ 6.36		$ 1.00
High	$ 2.00	$ 2.20	$ 3.55		$ 2.25	$ 2.50	$ 4.50		$ 3.64	$ 1.25	$ 2.00			$ 2.50
1996														
Base			$ 1.00		$ 1.10		$ 1.25	$ 2.50						
High			$ 4.00		$ 2.25		$ 4.50	$ 4.25						
1997														
Base			$ 1.10	$ 1.10					$ 0.77					
High			$ 4.70	$ 1.65					$ 3.83					
1998														
Base									$ 0.80			$ 3.33		
High									$ 4.02					

MUNI : High fare is for cable cars.
Benicia: High fare is for patrons travelling between Vallejo and Contra Costa County
Vallejo Ferry is monthly pass divided by 42 rides.
SamTrans: High fare is for all express routes, except 1F/19F
Oakland/Alameda Ferry: Prices are per trip cost of 10-ticket book (1990)

Table 5 (continued)
History of Transit Fares in Bay Area, 1970-1998

	Napa City	Tri-Delta	Benicia	Union City	LAVTA	30-Z	DB	WestCat	CityCoach (Vaca)	Flyer (Fairfld)	Oak/Ala Ferry	Sta Rosa City Bus	Sonoma County	Petaluma
1970														
Base														
High														
1975														
Base	$ 0.25	$ 0.25										$ 0.25		$ 0.25
High														
1980														
Base	$ 0.35	$ 0.25			$ 0.50			$ 0.60				$ 0.35	$ 0.35	
High														
1985														
Base		$ 0.50		$ 0.50		$ 0.60	$ 1.25					$ 0.60		
High						$ 0.85	$ -							
1990														
Base	$ 0.60	$ 0.60	$ 0.75	$ 0.75	$ 0.60	$ 1.00	$ 0.75	$ 0.75	$ 0.75	$ 0.75	$ 2.50			
High			$ 1.50				$ 1.50							
1995														
Base	$ 0.75	$ 0.75	$ 0.75	$ 0.75	$ 1.00			$ 0.75				$ 0.85	$ 1.05	$ 1.05
High			$ 1.50											
1996														
Base		$ 0.75												
High														
1997														
Base							$ 0.75				$ 2.75	$ 1.00		
High							$ 1.75							
1998														
Base							$ 1.00							
High							$ 2.00							

MUNI : High fare is for cable cars.
Benicia: High fare is for patrons travelling between Vallejo and Contra Costa County
Vallejo Ferry is monthly pass divided by 42 rides.
SamTrans: High fare is for all express routes, except 1F/19F
Oakland/Alameda Ferry: Prices are per trip cost of 10-ticket book (1990)

Figure 4.1
San Francisco Municipal Railway (Muni)
Base Fare: Historical and Projected

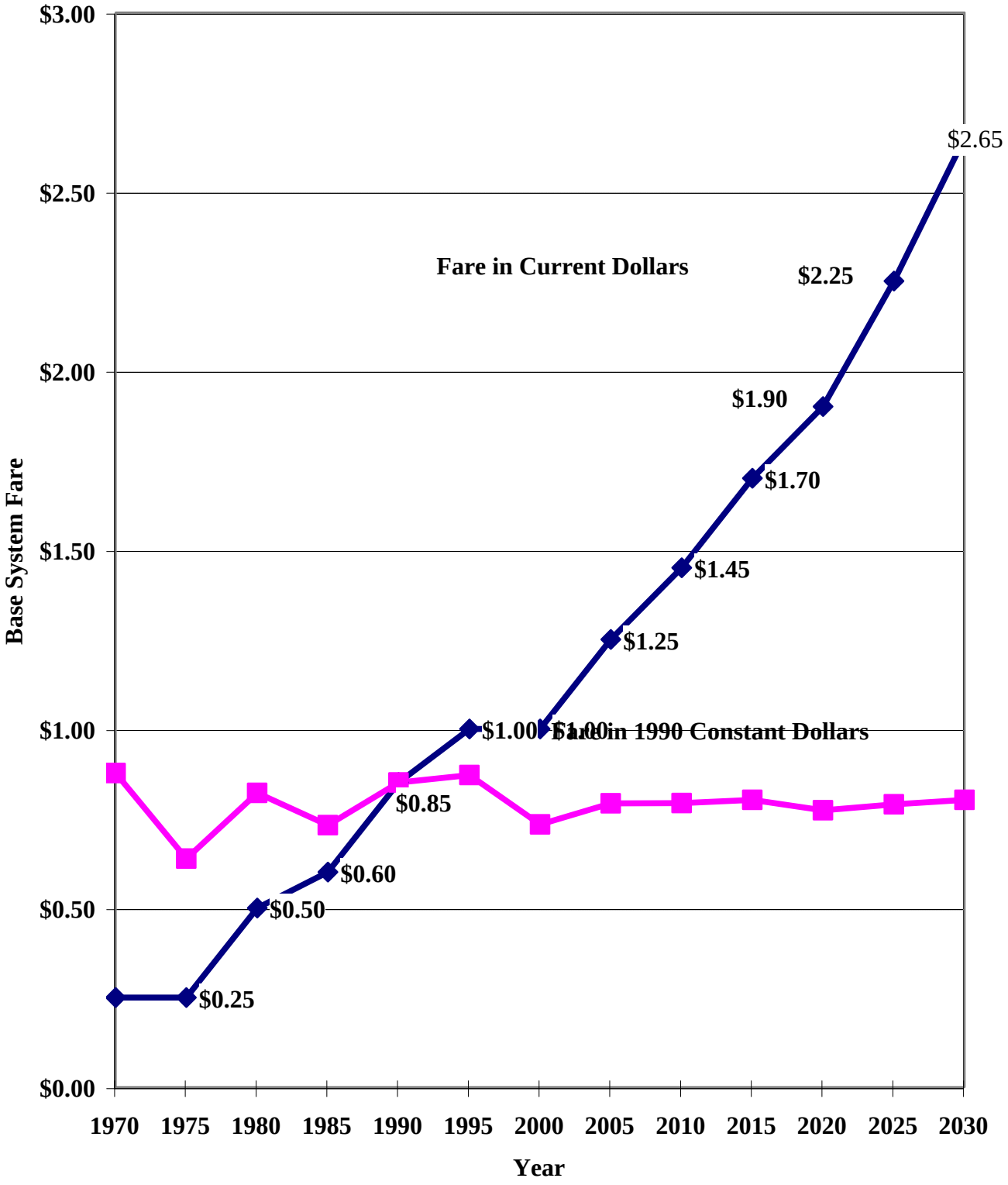

Figure 4.2
A.C. Transit District
Base Fare: Historical and Projected

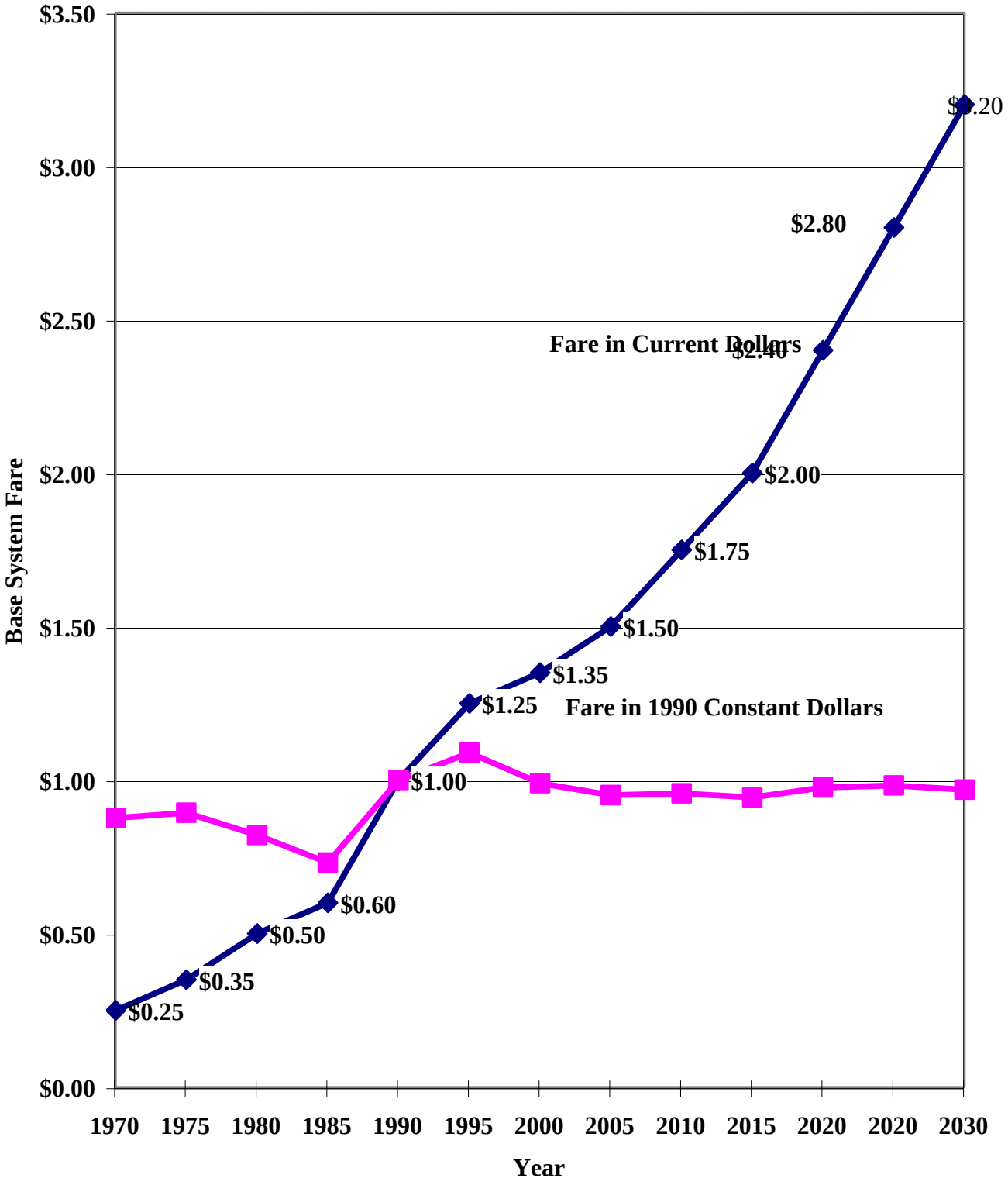

Figure 4.3
Bay Area Rapid Transit District (BART)
Base Fare: Historical and Projected

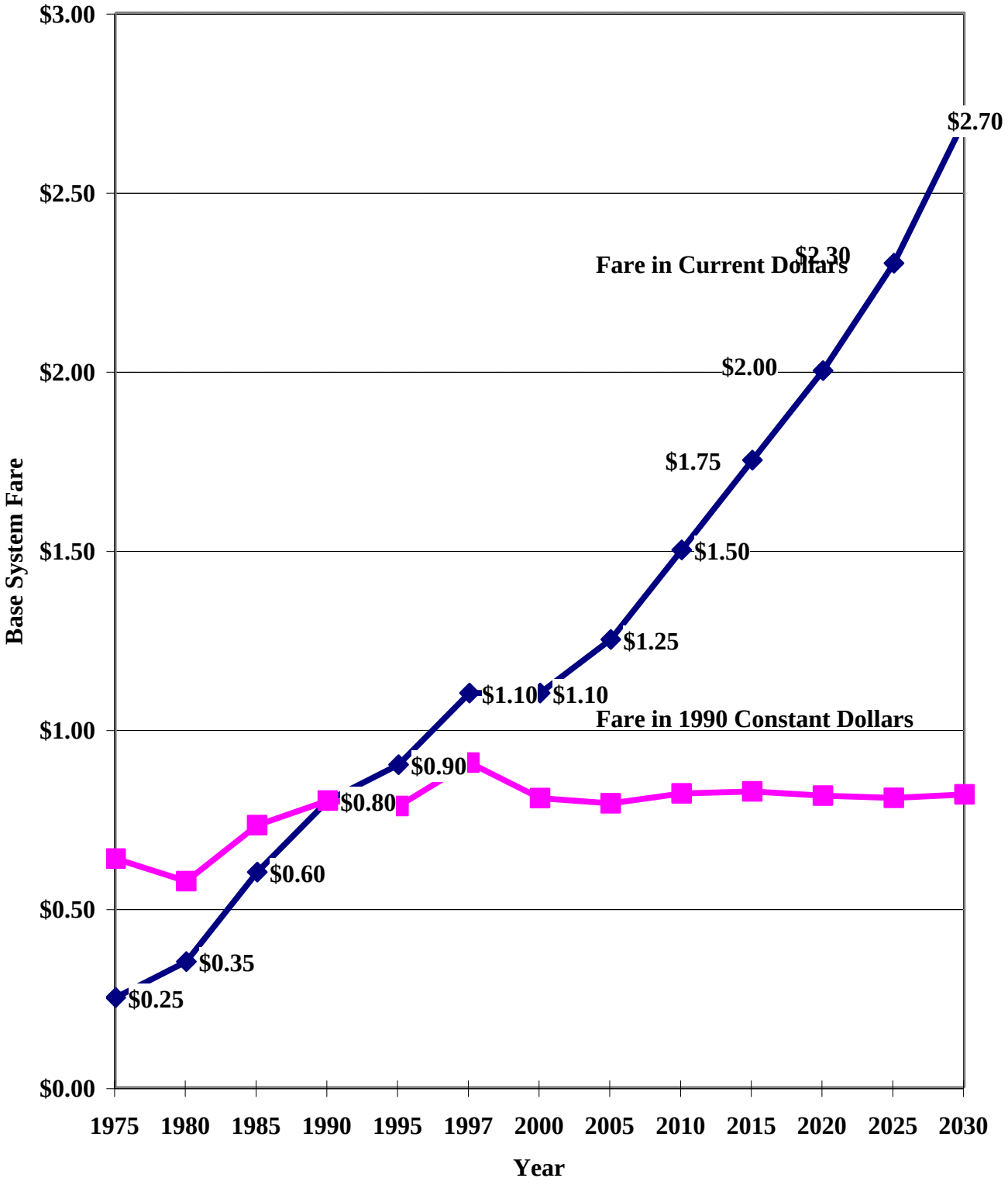

Table 6.1
Regional Highway Peaking Factors for AM and PM Peak Hours
"Old-Style" MTCFCAST Model System

AM/PM Peak Hour Trip Purpose	Trip Direction	1965 Survey	1981 Survey	1990 Survey	All Forecasts
AM Peak Hour Factors					
Home-Based Work	H –> W	0.17021	0.15656	0.15436	NA
Weighted Average	W –> H	0.00462	0.00483	0.00329	NA
Home-Based Non-Work	H –> NW	0.03162	0.04146	0.05319	0.04476
	NW –> H	0.01261	0.01459	0.01549	0.01576
Non-Home-Based	NW –> NW	0.02077	0.02404	0.02797	0.02404
HBW Drive Alone	H –> W	NA	0.14597	0.14418	0.14597
	W –> H	NA	0.00514	0.00352	0.00514
HBW Shared Ride 2+	H –> W	NA	0.17763	0.18514	0.17763
	W –> H	NA	0.00172	0.00158	0.00172
PM Peak Hour Factors					
Home-Based Work	H –> W	0.00686	0.00801	0.00788	NA
Weighted Average	W –> H	0.15601	0.12637	0.12533	NA
Home-Based Non-Work	H –> NW	0.03162	0.03528	0.02769	0.03626
	NW –> H	0.05506	0.06155	0.05050	0.06325
Non-Home-Based	NW –> NW	0.08814	0.08388	0.08207	0.08388
HBW Drive Alone	H –> W	NA	0.00790	0.00837	0.00790
	W –> H	NA	0.12661	0.12612	0.12661
HBW Shared Ride 2+	H –> W	NA	0.00857	0.00661	0.00857
	W –> H	NA	0.13595	0.12066	0.13595
Bay Bridge Spread Peak Factor		NA	NA	NA	0.62000
Ala/SC Spread Peak Factor		NA	NA	NA	0.70000

Table 6.2
Regional Highway Peaking Factors for AM and PM Peak Periods
"New-Style" BAYCAST Model System

AM/PM Peak Period Trip Purpose	Trip Direction	1990 Survey	All Forecasts
AM Peak Period Factors (0700-0900)			
Home-Based Work	H –> W	*0.26974 **	*0.26974 **
Weighted Average	W –> H	0.00661	0.00661
Home-Based Non-Work	H –> NW	0.06662	0.06662
(HBSH, HBSR)	NW –> H	0.02719	0.02719
Home-Based School	H –> School	0.28402	0.28402
	School –> H	0.01141	0.01141
Non-Home-Based	NW –> NW	0.05679	0.05679
HBW Drive Alone	H –> W	*0.25530 **	*0.25530 **
	W –> H	0.00707	0.00707
HBW Shared Ride 2+	H –> W	*0.31213 **	*0.31213 **
	W –> H	0.00421	0.00421
PM Peak Period Factors (1600-1800)			
Home-Based Work	H –> W	0.01584	0.01584
Weighted Average	W –> H	0.20792	0.20792
Home-Based Non-Work	H –> NW	0.06230	0.06230
(HBSH, HBSR)	NW –> H	0.10329	0.10329
Home-Based School	H –> School	0.02684	0.02684
	School –> H	0.05724	0.05724
Non-Home-Based	NW –> NW	0.14901	0.14901
HBW Drive Alone	H –> W	0.01644	0.01644
	W –> H	0.20856	0.20856
HBW Shared Ride 2+	H –> W	0.01529	0.01529
	W –> H	0.20548	0.20548

** Factors for AM peak period home-to-work trips are for illustrative use only. HBW departure time choice model is used in model application.*

Table 7
Year 1990 AM Peak Period Calibration Factors ("Peak Spreading Factors"), Superdistrict-to-Superdistrict

	To:																															
From	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**
1	--	--	--	--	0.60	0.60	0.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2	--	--	--	--	0.60	0.60	0.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	--	--	--	--	0.60	0.60	0.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	--	--	--	--	0.60	0.60	0.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	0.65	0.65	0.65	0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	0.65	0.65	0.65	0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7	0.65	0.65	0.65	0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8	0.70	0.70	0.70	0.70	0.30	0.30	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9	0.70	0.70	0.70	0.70	0.45	0.45	0.45	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	0.70	0.70	0.70	0.70	0.45	0.45	0.45	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
16	--	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
17	--	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
18	--	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
19	--	--	--	--	--	--	--	--	0.70	0.70	0.70	0.70	0.70	0.70	--	0.40	0.40	0.40	0.40	0.70	0.70	0.70	0.70	0.70	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
20	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	0.70	0.70	0.70	0.70	0.70	0.70	0.80	0.32	0.32	0.32	0.32	--	--	--	--	--	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
21	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	0.70	0.70	0.70	0.70	0.70	0.70	0.48	0.80	0.80	0.80	0.80	--	--	--	--	--	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
22	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	0.70	0.70	0.70	0.70	0.70	0.70	0.48	0.80	0.80	0.80	0.80	--	--	--	--	--	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
23	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	0.70	0.70	0.70	0.70	0.70	0.70	0.48	0.80	0.80	0.80	0.80	--	--	--	--	--	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
24	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	0.70	0.70	0.70	0.70	0.70	0.70	0.48	0.80	0.80	0.80	0.80	--	--	--	--	--	--	--	--	--	0.80	0.80	0.80	0.80	0.80	0.80
25	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.62	0.70	0.70	0.70	0.70	0.70	0.62	0.62	0.62	0.62	--	--	--	--	0.50	0.50	0.50	--	--	--
26	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.62	0.70	0.70	0.70	0.70	0.70	0.62	0.62	0.62	0.62	--	--	--	--	0.50	0.50	0.50	--	--	--
27	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.62	0.70	0.70	0.70	0.70	0.70	0.62	0.62	0.62	0.62	0.40	0.40	--	--	--	--	--	0.40	0.40	0.40
28	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.62	0.70	0.70	0.70	0.70	0.70	0.62	0.62	0.62	0.62	0.40	0.40	--	--	--	--	--	0.40	0.40	0.40
29	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.40	0.40	--	--	--	--	--	0.40	0.40	0.40
30	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.40	0.40	--	--	--	--	--	0.40	0.40	0.40
31	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.40	0.40	--	--	--	--	--	0.40	0.40	0.40
32	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	--	--	--	--	--	--	--	--	--	--
33	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	--	--	--	--	--	--	--	--	--	--
34	0.70	0.70	0.70	0.70	0.70	0.70	0.70	--	--	--	--	--	--	--	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	--	--	--	--	--	--	--	--	--	--

Table 8
Regional Work and Non-Work Trip Vehicle Occupancies
Historical and Projected

	Household Surveys			Model Simulation	
Trip Purpose	1965	1981	1990	2000	2030
Home-Based Work	1.180	1.129	1.095†	1.099*	1.109*
Home-Based Shop	1.443	1.241	1.416§	1.368*	1.361*
Home-Based Social / Rec	1.813	1.730	1.584§	1.547*	1.552*
Home-Based School	2.782	2.234	2.373§		
Home-Based Grade School			NA	NA	NA
Home-Based High School			3.205§	4.317*	4.145*
Home-Based College			1.164§	1.272*	1.318*
Non-Home-Based	1.445	1.254	1.206§	1.228*	1.231*
Total Trips	1.440	1.303	1.299§	1.341*	1.328*

1965, 1981 and 1990 vehicle occupancy rates derived from household travel surveys.
** Regional Model Simulation using BAYCAST system, not assumed.*
† Source: 1990 Census-based Observed Home-Based Work trips.

Standard Vehicle Occupancy Assumptions:
Drive Alone = 1.0 persons per vehicle
Shared Ride 2 = 2.0 persons per vehicle
Shared Ride 3+ = 3.5 persons per vehicle

Note: The vehicle occupancy rates for home-based shop and social/recreation trips are based on vehicle driver vs. vehicle passenger data from the 1965 and 1981 surveys. For the 1990 survey, the vehicle occupancy rates are based on drive alone, shared ride 2 and shared ride 3+ data. The vehicle occupancy data from the three household survey datasets are not strictly comparable, given the incomplete information on vehicle occupants obtained from household travel surveys.

Table 9
Ratio of Gas Prices in San Francisco and Los Angeles

		San Francisco	Los Angeles	Ratio SF/LA	Difference SF - LA
January	2001	$1.760	$1.609	1.09	$0.151
February	2001	$1.758	$1.666	1.06	$0.092
March	2001	$1.830	$1.708	1.07	$0.122
April	2001	$1.943	$1.826	1.06	$0.117
May	2001	$2.035	$2.067	0.98	-$0.032
June	2001	$2.006	$2.049	0.98	-$0.043
July	2001	$1.883	$1.896	0.99	-$0.013
August	2001	$1.709	$1.650	1.04	$0.059
September	2001	$1.856	$1.670	1.11	$0.186
October	2001	$1.758	$1.529	1.15	$0.229
November	2001	$1.638	$1.347	1.22	$0.291
December	2001	$1.419	$1.158	1.23	$0.261
January	2002	$1.325	$1.237	1.07	$0.088
February	2002	$1.313	$1.383	0.95	-$0.070
March	2002	$1.492	$1.585	0.94	-$0.093
April	2002	$1.679	$1.693	0.99	-$0.014
May	2002	$1.638	$1.657	0.99	-$0.019
June	2002	$1.667	$1.658	1.01	$0.009
July	2002	$1.698	$1.673	1.01	$0.025
August	2002	$1.680	$1.684	1.00	-$0.004
September	2002	$1.662	$1.677	0.99	-$0.015
October	2002	$1.632	$1.619	1.01	$0.013
November	2002	$1.703	$1.666	1.02	$0.037
December	2002	$1.667	$1.613	1.03	$0.054
January	2003	$1.744	$1.693	1.03	$0.051
February	2003	$1.950	$1.878	1.04	$0.072
March	2003	$2.186	$2.165	1.01	$0.021
April	2003	$2.149	$2.122	1.01	$0.027
May	2003	$1.952	$1.879	1.04	$0.073
June	2003	$1.875	$1.766	1.06	$0.109
July	2003	$1.907	$1.737	1.10	$0.170
August	2003	$1.968	$1.917	1.03	$0.051
September	2003	$2.139	$2.083	1.03	$0.056
October	2003	$1.897	$1.889	1.00	$0.008
November	2003	$1.750	$1.757	1.00	-$0.007
December	2003	$1.667	$1.715	0.97	-$0.048
				37.31	
				1.04	

Table 10
2025 Tolls on Bay Area Bridges

All Alternatives

Bridge	Share of Discounted Tolls	Full Price Toll (2025 $)	Discounted Toll (2025 $)	Average Toll (2025 $)	Average Toll (1990 $)	Avg. Toll / 2 (1990$)
Benicia	0%	$3.00	$3.00	$3.00	$1.05	$0.53
Carquinez	0%	$3.00	$3.00	$3.00	$1.05	$0.53
San Rafael	0%	$3.00	$3.00	$3.00	$1.05	$0.53
Golden Gate	0%	$3.00	$3.00	$3.00	$1.05	$0.53
Bay Bridge	0%	$3.00	$3.00	$3.00	$1.05	$0.53
San Mateo	0%	$3.00	$3.00	$3.00	$1.05	$0.53
Dumbarton	0%	$3.00	$3.00	$3.00	$1.05	$0.53
Antioch	0%	$3.00	$3.00	$3.00	$1.05	$0.53

CPI: 1990=406.0; 2025=1157.1; Ratio 0.3509

Table 11
Speed/Capacity Table (With Revised Speeds)
San Francisco Bay Area Regional Highway Networks

Area Type	**Facility Type**								Speed Class*	
	Frwy-to-Frwy (1)	Freeway (2)	Expwy (3)	Collector (4)	Fwy Ramp (5)	Dummy (6)	Major Arterial (7)	Metered Ramp (8)	Special (9)	Special (10)
Core (0)	1,700 40	1,850 55	1,300 40 (25)	550 10 (5)	1,300 30 (25)	N.A.	800 20 (15)	700 25 (20)	1,900 (A) 55	1,350 (G) 40 (25)
CBD (1)	1,700 40	1,850 55	1,300 40 (25)	600 15 (10)	1,300 30 (25)	N.A.	850 25 (20)	700 25 (20)	1,950 (B) 60	1,500 (H) 45 (30)
UBD (2)	1,750 45	1,900 60	1,450 45 (30)	650 20 (15)	1,400 35 (30)	N.A.	900 30 (25)	800 30 (25)	2,000 (C) 65	1,530 (I) 55 (40)
Urban (3)	1,750 45	1,900 60	1,450 45 (30)	650 25 (20)	1,400 35 (30)	N.A.	900 30 (25)	800 30 (25)	1,780 (D) 50	900 (J) 25 (20)
Suburb.(4)	1,800 50	1,950 65	1,500 50 (35)	800 30 (25)	1,400 40 (35)	N.A.	950 35 (30)	900 35 (30)	1,800 (E) 45	950 (K) 30 (25)
Rural (5)	1,800 50	1,950 65	1,500 55 (40)	850 35 (30)	1,400 40 (35)	N.A.	950 40 (35)	900 35 (30)	1,840 (F) 50	980 (L) 40 (35)

Upper Entry: Capacity at Level of Service "E" in vehicles per hour per lane, i.e., ultimate capacity

Lower Entry: Free-Flow Speed (miles per hour)

* Speed Class = (Area Type * 10) + Facility Type

N.A. = Not Applicable

Notes:

(A) TOS Fwy (AT=0,1); (B) TOS Fwy (AT=2,3); (C) TOS Fwy (AT=4,5); (D) Golden Gate; (E) TOS Fwy-to-Fwy (AT=0-3); (F) TOS Fwy-to-Fwy (AT=4,5)

(G) Expwy TOS (AT=0,1); (H) Expwy TOS (AT=2,3); (I) Expwy TOS (AT=4,5); (J) Art.Sig.Coor. (AT=0,1); (K) Art.Sig.Coor. (AT=2,3); (L) Art.Sig.Coor. (AT=4,5)

Speed values in parentheses are used in MTC speed post-processing routine, now considered the "main processing" routine.

Table 12
Distribution of Average Weekday Daily Vehicle Miles of Travel (VMT)
by Average Link Speed (mph)
13 Speed Cohorts used in ARB BURDEN Models
Forecasts Prepared for 2005 Update of Regional Transportation Plan

		2000 Base Year		2015 Intermediate Year		2030 RTP Forecast	
	Speed Cohort	VMT	% of Total	VMT	% of Total	VMT	% of Total
1	< 7.5 mph	1,607,270	1.1%	175,467	0.1%	619,057	0.3%
2	7.5 - 12.5 mph	768,811	0.5%	1,472,605	0.9%	2,748,906	1.4%
3	12.5 - 17.5 mph	8,617,212	6.0%	11,431,729	6.6%	14,019,771	6.9%
4	17.5 - 22.5 mph	10,430,867	7.3%	12,011,349	6.9%	16,649,606	8.2%
5	22.5 - 27.5 mph	20,688,657	14.4%	24,325,152	14.1%	28,744,081	14.1%
6	27.5 - 32.5 mph	15,699,998	10.9%	19,164,355	11.1%	22,387,019	11.0%
7	32.5 - 37.5 mph	11,969,989	8.3%	15,593,970	9.0%	17,703,415	8.7%
8	37.5 - 42.5 mph	3,756,947	2.6%	5,467,421	3.2%	5,857,806	2.9%
9	42.5 - 47.5 mph	5,457,459	3.8%	5,326,716	3.1%	6,396,630	3.1%
10	47.5 - 52.5 mph	5,376,444	3.7%	5,796,588	3.3%	5,195,599	2.6%
11	52.5 - 57.5 mph	5,699,263	4.0%	5,683,180	3.3%	6,867,636	3.4%
12	57.5 - 62.5 mph	27,966,485	19.4%	32,200,058	18.6%	35,597,325	17.5%
13	> 62.5 mph	25,762,334	17.9%	34,428,289	19.9%	40,765,501	20.0%
	TOTAL	143,801,736	100.0%	173,076,881	100.0%	203,552,352	100.0%

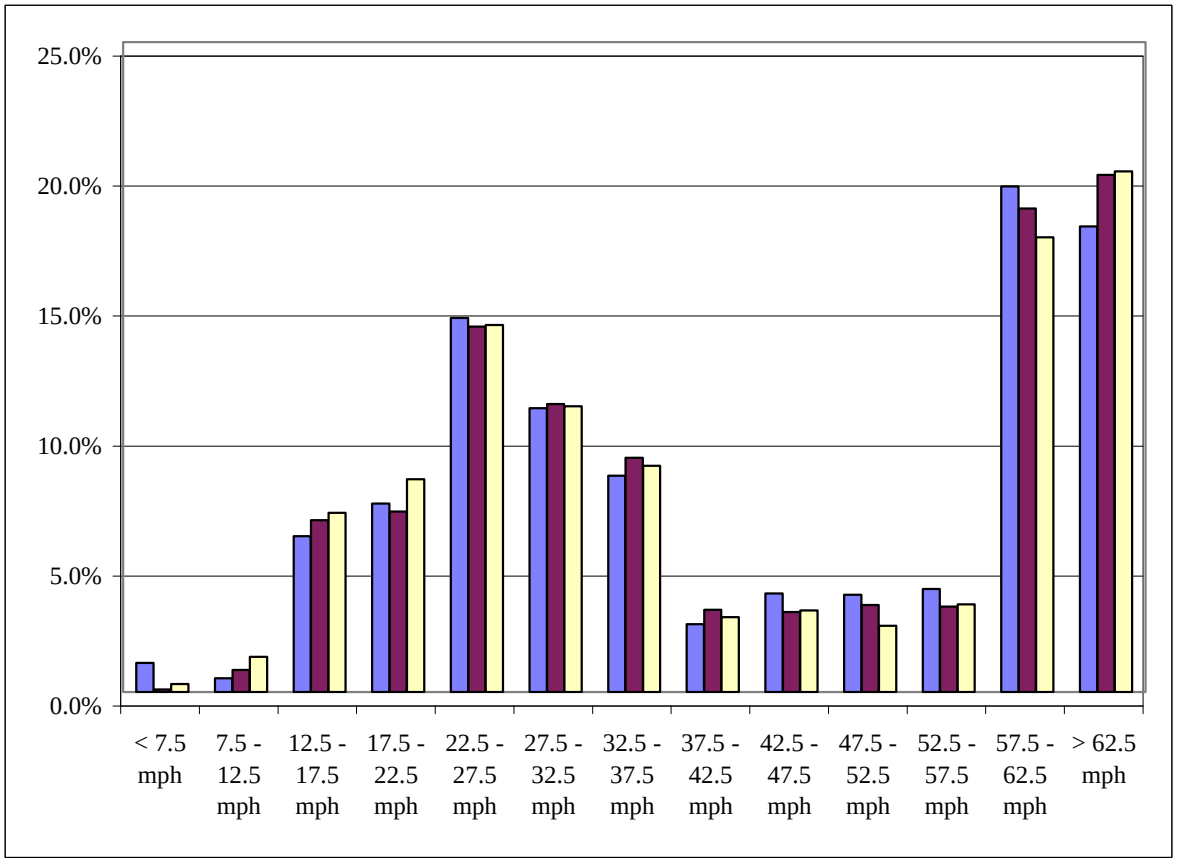

Table 13
Changes in Transit Operator Base Fares, 1998 to 2004

Operator	1998 Fare	2001 Fare	2004 Fare	Percent Change, 2001-2004	Date of Previous Change	Date of Recent Change
Muni	$1.00	$1.00	$1.25	25.0%	1995	9/1/2003
BART	$1.10	$1.10	$1.25	13.6%	1997	1/1/2004
AC Transit	$1.25	$1.35	$1.50	11.1%	10/1/1999	9/1/2003
SCVTA-Local	$1.10	$1.25	$1.50	20.0%	7/1/2002	8/1/2003
SCVTA-Express	$1.75	$2.00	$3.00	50.0%	7/1/2002	8/1/2003
SamTrans	$1.00	$1.10	$1.25	13.6%	8/15/1999	9/1/2003
Golden Gate (Marin)	$1.25	$1.50	$1.80	20.0%	7/1/1999	7/1/2003
Golden Gate (Sonoma)	$1.75	$2.15	$2.45	14.0%	7/1/2000	7/1/2003
Caltrain	$1.11	$1.11	$1.50	35.1%	1998	7/1/2002
CCCTA	$1.00	$1.25	$1.50	20.0%	9/1/1997	9/8/2002
Vallejo	$1.00	$1.25	$1.35	8.0%	1/1/2000	
Tri-Delta	$0.75	$0.75	$1.00	33.3%	7/1/1997	
WHEELS (LAVTA)	$1.00	$1.00	$1.25	25.0%	1995	8/1/2003

Notes:

1. For the 1998 RTP, fares as of February 1998 were used. For the 2001 RTP, fares as of May 2001 were used. For the 2005 RTP/TIP, fares as of March 2004 will be used.
2. Transit fares are from MTC records, and the Web site: http://www.transitinfo.org/
3. Caltrain fares are based on a 10-ride ticket book.
4. LAVTA increased adult fares to $1.25 on 11/1/01.
4. Golden Gate Transit fares shown are for intra-Marin and intra-Sonoma counties. Golden Gate Transit District increased fares on an annual basis between 1999-2001. The fare increases of 7/1/00 were used in the 2001 RTP.